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## ORIGINAL ARTICLES.

### DIETETIC THERAPEUTICS.

BY ALFRED K. HILLS.

*PART I.*

SIR. H. THOMPSON in "Diet in Relation to Age and Activity" says: "The great practical rule of life in regard of human diet will not be found in enforcing limitation of the sources of food which nature has abundantly provided. On the contrary, that rule is fulfilled in the perfect development of the art of adapting food of any and every kind to the needs of the body according to the very varied circumstances of the individual, at different ages, with different forms of activity, with different inherent personal peculiarities, and with different environments. This may read at first sight, perhaps, like a truism; but how important is the doctrine, and how completely it is ignored in the experience of life by most people, it will be my object here to show."

We must bear in mind, he says, that "the fact that the young and rapidly growing infant, whose structures have to be formed on the soft and slender lines laid down before birth, whose organs have to be solidified and expanded at one and the same time, in which tissues of all kinds are formed with immense rapidity and activity, requires animal food ready prepared in the most soluble form for digestion and assimilation. Such a food is milk; and if the human supply is insufficient, we obtain in its place that of the cow, chiefly; and during the first year of life, milk constitutes the best form of food. After that time, other kinds of nourishment, mostly well-cooked wheaten flour in various shapes, begin to be added to the milk which long continues to be a staple source of nourishment to the young animal. Eggs, a still more concentrated form of similar food, follows, and ultimately the dietary is enlarged by additions of various kinds, as the growing process continues through youth to puberty, when liberty is taken, more or less speedily, to do in all such matters 'as others do.'

"On reaching manhood, the individual, in ninety-nine cases out of a hundred, acquires the prevailing habit of his associates, and he feeds after that uniform prescription of diet which prevails, with little disposition to question its suitability to himself. A young fellow in the fullness of health, and habituated to daily active life in the open air, may, under the stimulus of appetite and of enjoyment in gratifying it, often largely exceed both in quantity and variety of food what is necessary to supply all the demands of his system, without paying a very exorbitant price for the indulgence. If the stomach is sensitive or not very powerful, it sometimes rejects an extravagant ration of food, either at once or soon after the surfeit has been committed; but if the digestive force is considerable, the meals, habitually superabundant as they may be, are gradually absorbed, and the surplus fund or nutrient material unused is stored up in some form. When a certain amount has been thus disposed of, the capacity for storage varying greatly in different persons, an undesirable balance remains against the feeder, and in young people is mostly rectified by a 'bilious attack,' through the agency of which a few hours of vomiting and misery square the account. Then the same process of overfeeding recommences with renewed appetite and sensations of invigorated digestion, until in two or three, or five or six weeks, according to the ratio existing between the amount of food ingested and the habit of expending or eliminating it from the body, the recurring attack appears and again clears the system, and so on during several years of life. If the individual takes abundant exercise and expends much energy in the business of life, a large quantity of food can be properly disposed of. Such a person enjoys the pleasure of satisfying a healthy appetite, and doing so with ordinary prudence not only suffers no harm, but consolidates the frame, and enables it to resist those manifold unseen sources of evil which are prone to affect injuriously the feeble. On the other hand, if he is inactive, takes little exercise, spends most of his time in close air and in a warm temperature, shaping his diet, nevertheless, on the liberal scheme just described, the balance of unexpended nutriment soon tells more or less heavily against him, must be thrown off in some form or other, more or less disagreeable, and somewhat unfairly perhaps regarded as a visitation of disease.

"After the first half or so of life has passed away, instead of such periodical attacks of sickness, the unemployed material may be relegated in the form of fat to be stored on the external surface of the body, or be packed among the internal organs, and thus he or she may become corpulent or heavy, if a facility for converting

appropriate material into fat is consistent with the constitution of the individual; for some constitutions appear to be without the power of storing fat however rich the diet or inactive their habits may be. When, therefore, this process can not take place, and in many instances, also, when it is in action, the over-supply of nutritious elements ingested must go somewhere, more or less directly, to produce disease in some other form, probably at first interfering with the action of the liver, and next appearing as gout or rheumatism, or as the cause of fluxes and obstructions of various kinds. Thus recurring attacks of gout perform the same duty, or nearly so, at this period of life, that the bilious attacks accomplished in youth, only the former process is far more damaging to the constitution and materially injures it.

"* * * In order to preserve our health when that period of blatant, rampant, irrepressible vigor which belongs to youth has passed away, it is time to see that our income of food and our expenditure through such activity as we have, constitute an harmonious equality, or nearly so. A well-hoarded balance of nutritive material now becomes a source of evil, telling against its possessor, and by no means in his favor. And it is a balance which it is so agreeable and so easy to form, and which often so insidiously augments, unless we are on our guard against the danger. The accumulated store of aliment—the unspent food so to speak—which saturate the system are happily often got rid of by those special exercises to which so large a portion of time and energy is devoted by some people. It is to this end that men at home use dumb-bells or heavy clubs, or abroad shoot, hunt and row, or perform athletic and pedestrian feats, or sweat in Turkish baths, or undergo a drench at some foreign watering-place—all useful exercises in their way, but pursued to an extent unnecessary for any other purposes than to eliminate superfluous nutrient materials, which are occasioning derangements in the system, for which these modes of elimination are sometimes an efficient cure, and thus are often ordered by the medical adviser.

"But as we increase in age—when we have spent say, our first half-century—less energy and activity remain, and less expenditure can be made; less power to eliminate is possible at fifty than at thirty, still less at sixty and upwards. Less nutriment, therefore, must be taken in proportion as age advances, or rather as activity diminishes, or the individual will suffer. If he continues to consume the same abundant breakfasts, substantial lunches and heavy dinners, which at the summit of his power he could dispose of almost with impunity, he will in time certainly either accumulate fat or become acquainted with gout or rheumatism, or show signs of unhealthy deposit of some kind in some part of the body, processes which must inevitably empoison, undermine, or shorten his remaining term of life. He must reduce his 'intake' because a smaller expenditure is an enforced condition of existence. At seventy the man's power has further diminished, and the nutriment must correspond thereto, if he desires still another term of comfortable life. And why should he not? Then at eighty, with less activity there must be still less 'support.' And on this principle he may yet long continue, provided he is not the victim of an inherited taint or vice of system too powerful to be dominated, or that no unhappy accident inflicts a lasting injury on the machine, or no unfortunate exposure to unsanitary poison, has shaken the frame by long exhausting fever; and then, with a fair constitution, he may remain free from serious troubles and arrive at a good old age, reaching far beyond the conventional seventy years, which were formerly supposed to represent the full limit of man's fruitful life and work on earth.

"But how opposed is this system to the favorite popular theory? Have we not all been brought up in the belief that the perfection of conduct consists, truly enough, in temperate habits in youth and middle life, such duty, however, being mostly enforced by the pleasant belief that when age arrived we might indulge in that extra 'support'—seductive term, often fruitful of mischief—which the feebleness of advancing years is supposed to deserve? The little sensual luxuries hitherto forbidden, now suggested by the lips of loving woman, and tendered in the confidence of well-doing by affectionate hands, are henceforth to be gracefully accepted, enjoyed and turned to profit in the evening of our declining years. The extra glass of cordial, the superlatively strong extract of food, are now to become delicate and appropriate aids to the enfeebled frame. Unhappily for this doctrine, it is, on the contrary, precisely at this period that concentrated aliments are not advantageous or wholesome, but are to be avoided as sources generally prolific of trouble. If the cordial glass and the rich food are to be enjoyed at any time, whether prudently or otherwise, like other pleasures they must be indulged when strength and activity are great—in other words, when eliminating power is at its maximum, assuredly not when the circulation is becoming slow and feeble, and the springs of life are on the ebb. For the flow of blood can not be driven into any semblance of the youthful torrent by the temporary force of stimulants, nor is it to be overcharged by the constant addition of rich elements which can no longer be utilized.

"Although broad rules or principles of diet may be enunciated as applicable to different classes of people in general, no accurate adaptation to the individual is possible without a knowledge of his daily habits and life, as well as to some extent of his personal peculiarities. No man, for

example, can tell another what he can or ought to eat without knowing what are the habits of life and work—mental and bodily—of the person to be advised. Notwithstanding which, no kind of counsel is more frequently tendered in common conversation by one stranger with another than that which concerns the choice of food and drink. The adviser feels himself warranted by the experience that some particular combination of nourishment suits his own stomach, to infer without hesitation that this dish will be therefore acceptable to the stomachs of all his neighbors. Surely the intelligence of such a man is as slender as his audacity and presumption are large. It would not be more preposterous if, having with infinite pains obtained a last representing precisely the size and the peculiarities in form of his own foot, he forthwith solemnly adjured all other persons to adopt boots made upon that model, and on none other. Only it may be confidently assumed that there is much more difference between stomachs and their needs among different individuals, than among the inferior extremities referred to for the purpose of illustration.

"Few people will believe how easy it is in most instances to avoid these stomach derangements and their results, by adopting appropriate food, and that such brain-workers can really enjoy a fair degree of health and comfort by living on light food which does not require much force to digest and much muscular activity to assimilate.

"'Indigestion' is rarely a disease in any sense of the word, but merely the natural result of errors in diet. For most men it is the penalty of conformity to the eating habits of the majority; and a want of disposition or of enterprise to undertake a trial of simpler foods than those around them consume probably determines the continuance of their unhappy troubles. In many instances it must be confessed that the complaint, if so it must be called, results from error, not in the quality of the food taken, but in the quantity. Eating is an agreeable process for most people, and under the influence of very small temptation, or through undue variety furnishing a source of provocation to the palate, a considerable proportion of nutritious material above what is required by the system is apt to be swallowed.

"Not one person in a hundred who complains of indigestion has any morbid affection of the organs engaged in assimilating his food. As commonly employed, the word 'indigestion' denotes, not a disease, but an admonition.

"It means, however, that the individual thus admonished has not yet found his appropriate diet: that he takes food unsuited for him, or too much of it. There is no food whatever which is 'wholesome in itself'—and there is no fact which people in general are more slow to comprehend. That food only is wholesome which is so to the individual; and no food can be wholesome to any given number of persons. Milk, for example, may agree admirably with me, and may as certainly invariably provoke an indigestion for my neighbor; and the same may be said of almost every article of our ordinary dietary. The wholesomeness of a food consists solely in its adaptability to the individual, and this relation is governed mainly by the influences of his age, activity, surroundings and temperament or personal peculiarities."

The human body consists of thirteen elements, of which five are gases and eight solids. If we consider the chemical composition of a man of the average weight of 154 pounds, we will find that he is composed in large part of *oxygen*, which is in a state of extreme compression. In fact, a man weighing 154 pounds contains 97 pounds of oxygen, the volume of which, at ordinary temperature, would exceed 980 cubic feet. The *hydrogen* is much less in quantity, there being less than 15 pounds, but which, in a free state, would occupy a volume of 2,800 cubic feet. The three other gases are *nitrogen*, nearly 4 pounds; *chlorine*, about 26 ounces, and *flourine*, 3¼ ounces. Of the solids, *carbon* stands at the head of the metalloids, there being 48 pounds. Next comes *phosphorus*, 26 ounces, and *sulphur*, 3¼ ounces. The most abundant metal is *calcium*, more than 3 pounds; next *potassium*, 2½ ounces; *sodium*, 2¼ ounces; and lastly, *iron*, 1¼ ounces. The various combinations made by these thirteen elements are almost innumerable.

M. Levan, who has, for several years, studied the relation between the nervous system and general nutrition, has arrived at the following conclusions: The normal proportion of urea during twenty-four hours is 28 grammes to 1,250 grammes of urine. In persons suffering from nervous disorder it is reduced to five, six or eight grammes; the number of corpuscles in the blood is reduced by two or three millions; the increase or diminution of adipose tissue varies considerably.

From recent experiments Prof. Botkin (*L'Union Medicale du Canada*) asserts that,

1. Bitters diminish the digestive power and retard digestion; they diminish the quantity of peptones.

2. Bitters diminish the secretion of the gastric juice. If they produce a feeling of hunger, it is only by irritating the gastric mucous membrane.

3. Bitters have no influence upon the secretion of the pancreatic juice or the bile.

4. Bitters not only do not diminish, but actually promote fermentation in the contents of the stomach.

From all this, the author is led to believe, contrary to current medical views, that bitters are of no use in the treatment of disorders of digestion.

All the heavy work of the world is not done by men who eat meat. The Roman soldiers, who

built such wonderful roads and carried a weight of armor and luggage that would crush the average farm hand, lived on coarse brown bread and sour wine. They were temperate in diet and regular in exercise. The Spanish peasant works every day and dances half the night, yet eats only his black bread, onion and watermelon. The Smyrna porter eats only a little fruit and some olives, yet he walks off with his load of a hundred pounds. The coolie, fed on rice, is more active, and can endure more than the negro fed on fat meat.

The *British Medical Journal* has published some remarks on the subject of fruit as food, which, though devoid of novelty, nevertheless bear repetition. It says that, "taken in the morning, fruit is as helpful to digestion as it is refreshing. The newly awakened function finds in it an object of such light labor as will exercise without seriously taxing its energies, and the tissues of the stomach acquire, at little cost, a gain of nourishment which will sustain those energies in later and more serious operations. It is an excellent plan, with this object in view, to add a little bread to the fruit eaten. While admitting its possession of these valuable qualities, however, and while also agreeing with those who maintain that in summer, when the body is, at all events in many cases, less actively employed than usual, meat may be less and fruit or vegetables more freely used as a food, we are not prepared to allow that even then an exclusively vegetarian regimen is that most generally advisable. Meat provides us with a means of obtaining albuminoid material, which is indispensible in its most easily assimilable form. It affords us in this material not only an important constituent of tissue growth, but a potent excitant of the whole process of nutrition. It has, therefore, a real, definite and great value in the ordinary diet of man, and the wholesomeness of fruit, combined with farinaceous food as an alternative dietary, is not so much an argument in favor of the vegetarian principle as a proof that seasonable changes in food supply are helpful to the digestive processes and to nutritive changes in the tissues generally."

Fruit, however, is not suited to all who attempt to eat it.

Ellenberger and Hofmeister have recently published a résumé of their studies on the subject of "The Digestion of Carbo-Hydrates." According to them the action of saliva in the process of mastication is shown to be more mechanical than chemical. The quantity of saliva used depends on the dryness and roughness of the food rather than its contents in starch. The chemical activity of saliva owes much to spores, which, floating in the atmosphere, mix with the food and assist in the fermentation process. A digestive action of the mixed food takes place in the stomach of the horse (this being the animal chiefly experimented upon) when the acidity due to hydrochloric or lactic acid does not exceed 0.03 to 0.04 per cent. The activity of pepsin does not increase in proportion to its quantity after reaching a certain point, but it rather becomes injurious. The acid which appears first in the digestive process is lactic acid, and later hydrochloric. At the time of greatest activity lactic acid is present in the upper and lower extremities of the digestive tract, hydrochloric acid being found in the intervening part. The digestion of starch in the stomach of the horse lasts for about two hours; that of albuminous matter takes place later, and occupies three or four hours after the eating of the food. The drinking of water immediately after food does not appear to hinder digestion. The secretions of the intestinal canal unite in themselves all the properties of the gastric juice, and can act as a substitute for it, and are particularly energetic in the decomposition of fats. The duration of the digestive process in the horse is long, lasting almost three days. A very active lactic fermentation of sugar takes place in the stomach and intestines, but the authors do not say that all the sugar which is lost in the course of passage is lost in that way.

From a study of the subject of rectal alimentation, Dr. Weaver (*Transactions of the Luzerne County Medical Society*) has formulated the following conclusions:

1. By the use of enemata life can be sustained indefinitely with little, if any, loss of weight to the body.

2. In a large proportion of cases in which rectal aliment is used, true digestion of albuminous, saccharine and fatty food takes place, by virtue of a reversal of the normal peristalsis of the alimentary tract.

3. While this is the case, there are doubtless instances in which retrostalsis does not occur, and for that reason the food used should first be artificially digested before being injected into the rectum.

4. While milk, eggs and brandy are the best aliment for rectal nutrition, no one article should be used for too long a time, but frequent changes should be made, observing the greatest care to prevent irritation of the rectum, or intolerance of that organ for the nutriment required.

5. The enemata should, if possible, be administered by the physician himself. Where difficulty in retaining the aliment is encountered, the colonic method is preferable, the food being propelled through a rectal bougie. The food should be of the temperature of the body.

6. The rectum having once become intolerant of enemata, *absolute rest* must be given to that viscus for a few days, and reliance be placed on nutritious inunctions of the surface of the body.

7. For rectal alimentation there exists a wider range of usefulness than has heretofore been as-

signed to it. It is not only appropriate in the severer forms of chronic disease of the stomach and œsophagus, but is indicated and should be utilized in the management of all *acute* diseases when, from any cause, the stomach becomes intractable and rebellious.

8. In diseases of the stomach, even where a portion of the food ingested is retained by that organ, only to undergo fermentation, inducing thereby pain and distress, it is more logical to resort to rectal alimentation, not as an *adjunct* to, but a *substitute* for, stomachal ingestion.

9. Certain organic lesions as well as functional disturbances of the stomach are curable by means of rest to that organ, and by no other means. In rectal alimentation we have a safe and sure means of nutrition, pending the necessary period of rest to that organ.

I had a curious experience in a case of suspected gall-stones, in which the patient, a female, had retained little or no food for days. I prescribed rectal alimentation with Rudisch sarco-peptones with the effect of bringing away eight large-sized stones and the patient recovered.

In cases of hematemesis and in gastritis I have used the rectal feeding with brilliant results, all that could be expected.

Dr. Uffelman, having studied foods as affected by temperature, says that cold food and drinks lessen body temperature; the lowered temperature is a genuine loss of heat.

The ingestion of cold substances lessens the irritability of the diseased stomach.

Cold substances raise the tone of the stomach, increase intestinal peristalsis, they promote the passage of stools, and in dysentery cause an increase of pain.

Cold foods and drinks increase the liability to cough.

Warm foods raise the temperature slightly and promote perspiration.

Hot foods and drinks are more stimulating than cold.

When often given, hot foods lessen the tone of the digestive tract.

It should be generally known that one of the most important agencies in the digestion and assimilation of food, is *water*, and that 75 per cent. of the human body is composed of water, and that four and one-half pounds is daily thrown off by the healthy body, and that a diet largely nitrogenous will tax the system severely, unless a considerable quantity of water be taken for the purpose of getting rid of the waste. It is estimated that a full-grown male adult requires 52 fluid ounces of water daily, and organized structure will not perform its function without its due proportion of this agent. The evils of over-preponderance of fluid in the system should be guarded against in the interest of the solid elements, although the dangers from this source are far less than from too little fluid. It is cruel to neglect to provide children with cold water to drink, at frequent intervals, particularly in hot weather, no matter how they are being fed. If the thirst is allayed by this natural diluent, the child may refuse food, which is only being taken to relieve the parched mouth, and is not demanded and will not be tolerated as nutrition. What we now have to say, says the London *Lancet*, on this subject, relates to the wisdom and reason of drinking largely of fluids which are in the first place and principally solvents and diluents. Not very long ago those unhappy folk who go wearily and sadly, because, forsooth, they are waxing fat, were warned to leave off drinking largely and minimize the quantity of liquid they consumed. Never before, perhaps, was there a more mischievous "fad" imposed on a too credulous public than this reduction of the amount of fluid taken. Now the obese are, by the rotary madness of the crazy in physic, counselled to drink deeply. This, at least, is a safe policy, and whether or not it does anything in aid of the removal of fat, it will certainly not produce the evil consequences which have in too many cases been brought about by the abstinence from solvents and diluents. Our concern is not with the "anti-fat" movement; with this we have no sort of sympathy, except in so far as an accumulation of adipose tissue may chance to be morbid. Meanwhile there are physiological facts in relation to drinking which ought to be recalled by those who know them, and brought to the knowledge of the unskilled in medicine, because they concern the promotion of health. Thus it is essential that there should be constantly passing through the organism a flushing, as it were, of fluid, to hold in solution and wash away the products of dissimilation and waste. If there be not a sufficient endosmose, the exosmose must be restricted, and effete matters, soluble in themselves, but not dissolved because of the deficiency of fluid available, will be retained. Take, for example, the uric acid; this excrementitious product requires not less than some 8,000 times its bulk of water at the temperature of the blood to hold it in solution; and if it be not dissolved it rapidly crystallizes, with more or less disastrous consequences, as in gout, gravel, and probably many other less well-recognized troubles. We only mention this particular excrement by way of illustration. In all, it may be fairly concluded that not less than three and a-half pints should be consumed by any person in the twenty-four hours, and when the body is bulky four or even five pints should be the average. It is, moreover, desirable that the fluid thus taken should be in the main either pure water or water in which the simplest extracts are held in solution. When fluid taken "as drink" is itself heavily charged with solid matter, it can not fairly be expected to so entirely rid itself of this burden in the process

of digestion and absorption as to be available for solvent purposes generally, although the separation between solid and fluid ingredients of the food is doubtless fairly complete in the processes preparatory to assimilation. The aim should, nevertheless, be to supply the organic needs in this particular, abundantly and with such fluids as are not overloaded with solids, but simple and readily available as solvents.

Ebstein, in his work on corpulence, gives some practical points for the reduction of obesity.

According to him, fattening is strictly analogous to the fattening of cattle, and depends on over-feeding. He, however, disputes the current view that fat makes fat; on the contrary, he thinks fatty food protects the albumen and prevents its forming fat. His plan of treatment, therefore, consists in moderating the quantity of food, and while cutting off all vegetable carbohydrates, sugar, starch, etc., allowing a moderate quantity of fat, two or three ounces daily, to be taken. He also suggests that the diet should be monotonous, greasy and succulent, so as to cause satiety rapidly. He disallows beer, but permits light wines.

The plan advocated appears rational, and is free from the objection to Banting's method, which is too much like starvation. The following is the diet used successfully by Ebstein in one of his cases:

Breakfast. One large cup of black tea—about half a pint—without sugar; two ounces of white bread or brown bread, toasted, with plenty of butter.

Dinner. Soup, often with marrow, from four to six and one-half ounces of roast or boiled meat, vegetables in moderation, leguminous preferably, and cabbages. Turnips were almost, and potatoes altogether, excluded. After dinner, a little fresh fruit. For second course, a salad or stewed fruit without sugar. Two or three glasses of light wine; and immediately after dinner a large cup of tea, without milk or sugar.

Supper. A large cup of black tea, as before. An egg, a little fat roast meat, or both, or some ham with its fat, bologna sausage, bread well buttered, occasionally a small quantity of cheese, and some fresh fruit.

On this diet the patient lost twenty pounds in six months.

Ebstein insists on the necessity of always keeping to the restricted diet, if the tendency to corpulence is to be successfully combated.

Obesity is a condition, says Dr. Fothergill, often calling for a remedy. Dr. Banting induced many persons to adopt the dietary of the carnivorous animals; but while they lost weight, the new demand upon the liver and kidneys has been fraught with disaster. Many a corpulent person has gone down to his grave with Bright's disease as the direct consequence of the adoption of Bantingism. The avoidance of carbo-hydrates was correct; for the excess of grape sugar is laid down as adipose tissue. The error lay in allowing so much albuminoid food. Prof. Ebstein remembering the fact that fat is not deposited as fat in the body, cuts down the carbo-hydrates, but encourages the eating of fat—with the happiest results. This is a rational and safe plan, wherever the palate and the stomach will permit of it.

From all this it will be seen how important is the matter of dietetics in the treatment of disease. But their knowledge is requisite in order to select the food according to the indications in each case. When a young and previously healthy adult is stricken down with fever, he meets, in convalescence, the tissue-waste of the pyrexial stage, by practically unlimited quantities of albuminoid food, especially the flesh of animals; by which means tissue-repair is fostered and encouraged. But when a person is losing flesh from liver-incapacity, of which the evidence is abundance of lithates in the urine, to feed that individual on a liberal dietary or one rich in albuminoids, is only "to feed the disease and not the system," in old-world parlance. The excess of proteid matter only further embarrasses the incompetent viscus, and deepens the morbid condition. A light non-nitrogenized dietary is compatible with recovery of its functional capacity by the disabled liver.

To know what is amiss and what is required, and the food indicated, is one of the side pieces of the ladder, a knowledge of the chemical constituents of food and the digestion of each form of food, is the other side-piece of the ladder by which the sick man climbs back to health. The rungs of the said ladder are supplied piecemeal by various articles of food in an ascending series. First come soluble carbo-hydrates—baby foods—milk and meat infusions. Then fish and farinaceous food. Then a sweet-bread, game or chicken. Finally the solid joint, or chop, or steak. But it is not every one who can climb to the top of the ladder, and many stop at various halting places.

Vegetarianism. "I do not hesitate to say," observes Dr. B. W. Richardson, "that this consideration brings us face to face with that system of feeding which is called 'vegetarianism.' We have not to consider how to avoid living on such a purely animal and natural food as milk, for example; we are not to consider how to learn to live on vegetables which contain more water than the 75 per cent. of water which is present in legs of mutton and in other similar animal foods. But we really ought to consider the question of utilizing, on a large scale, all vegetables which, in nutrient value, stand above animal products. We have also to learn, as a first truth, that the oftener we go to the vegetable world for our food the oftener we also go to the first, and, therefore, the cheapest source of supply. The commonly accepted notion that when we eat animal flesh we

are eating food at its prime source can not be too speedily dissipated or too speedily replaced by the knowledge that there is no primitive form of food —albuminous, starchy, osseous—in the animal world itself, and that all the processes of catching an inferior animal, of breeding it, rearing it, keeping it, killing it, dressing it, and selling it, mean no more and no less than entirely additional expenditure throughout for bringing it into what we have been taught to consider an acceptable form of food, the veritable food which the animal itself found, without any such preparation, in the vegetable world. With the light of these natural facts filling the national mind, the tendency of all advanced scholars in thrift should unquestionably be to find out plans for feeding all the community, as far as possible, direct from the lap of earth; to endeavor to discover how the fruits of the earth may be immediately utilized as food; and to impress science into our service, so that she, in her laboratories, may prepare the choicest viands, minus the necessity of making a lower animal the living laboratory for the sake of what is just a little higher than cannibal propensities.

Dr. Fothergill proposes as a diet for brain-workers "a plate of porridge, hominy, etc., with a pint of cream and some stewed fruit to finish off for breakfast. For lunch, some well buttered mashed potatoes, with biscuit and butter and a glass or two of milk. For dinner, some boiled fish, followed by some chicken or game and a milk pudding made without an egg, and digestive biscuits and butter (with just a nip of cheese as a flavoring agent, for those who can eat cheese) with a glass or two of good French wine or its equivalent." We can not agree with Dr. Fothergill in supposing that this diet will agree with any considerable proportion of brain or any other kind of workers. Few people can take a pint of cream a day and continue it for any considerable length of time, and comparatively few healthy people could take the wine to advantage. It is difficult to formulate *general* rules of this kind.

## THE BIOLOGY OF THOUGHT, WITH SPECIAL REFERENCE TO THE ALIENATION OF THE MIND.

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### X. PROPHYLAXIS AND TREATMENT.

*B. In Psychological Regard.*

ALL those, who, like the metaphysicians of the mongrel branch of medical science, "Mental Physiology," deny the mentality of protoplasm, are struggling in vain in the dilemma, to either dispense with mentality at all, or have it come into play like a *Deus ex machina*, appearing on the stage without any clew of its part except the arbitrary pleasure of the wire-puller behind the scenery. Honest psychology is not subject to such alienating alternative. Without a tendency to support with spurious science traditional dogmatism, it is open to argument, and hesitates all the less to see mentality in the power of differentiation of the amœba, the cell, the protoplasmic actuation of which it is from which is developed human individuality, as there is, dogmatically, even, absolutely no sensible reason, to look at mentality as a foreign something incapsuled inside the vault of the cranium. In psychology it would be as absurd to deny our mental parentage in the protoplasmic germ of adult growth, as it would be in the oak to deny physiologically its upstart from the acorn. "Every cell, could we but behold its inner molecular mechanism, differs from its neighbor;" "in the highest forms of life . . . the same laws operate as in the lowliest living creatures."* As little a miracle as in evolving out of the amorphous particle of protoplasm an individual cell, in which from the particularities of its actuation it would seem "as though we might regard the nucleus as the directive brain," † is acted, therefore, by nature, in investing a minute human ovum with the faculty, to develop, by virtue of impregnation, such a big institution as a Professor of the London (Eng.) University, be it with considerable intellectual endowment, or only the rudimentary traces of the same. There is a habit in chemistry, now fast becoming perfunctory, to divide up its material in anorganic and organic. But it would be as irrational as the denying of mentality to the world but on its animal phase of evolutionary display, if we were to deny the anorganic repose as the cradle of organic motion. The most complex carbon-compounds are not an inch nearer to the intimacy of existence, which is called mind, than the ferric hydrate, which with the help of oxygen hydrogen forms out of iron. All the kinesis which is admired in organisms is possible only by virtue of the potentiality owned by the mineral kingdom, and the atomicity of the list of elements at which analytic science so far had to stop short, as the metabolic starting point of physiological formation, is likewise the outline of the bodily representatives of mentality, which psychology has to acknowledge. And the curious kind of commentary, given by magnetism and electricity to the so-called "dead matter," bids fair to bring a day, when it is thought ridiculous, to call blind, because without human eyes, the faculty of differentiation of the amœba, as to which "exact studies have shown that it neither accepts nor retains without considerable power of discrimination," ‡ and to the creating skill of which is due all the beauty of plants and all the wondrous proprieties of the fruits of the world's vegetation, and as to which physiology must conclude: "it is not likely that this quality is wholly lost even in the highest mammals." § And this holds good in

* Wesley Mills, Animal Physiology, pp. 26, 27. † Id. ibid., p. 6.
‡ Wesley Mills, l. c., p. 296. § Id. ibid., p. 274.

psychological regard. "The plastic power of the supreme cerebral centers" is "something deeper than conscious mental function," a scientific conclusion of Maudsley * which is confirmed by practical relations. It is a fact, that it was in their young, their teeming years, when men of superior mind, inventors, philosophers, poets, had their great leading thoughts. According to the hybrid branch of medical science, "Mental Physiology," genius, as the upshot of reflection and abstract deliberation, ought to show itself in its glory long way up in the fifties and sixties, when the brain is well stored with knowledge, and extensively exercised with intellectual labor. But the contrary obtains. Old age is good to elaborate thought. But whoever did not feel in his youth the stirring of genius, will wait for it in vain after having passed the thirty, the terminal point of the exhibition of thought of which to the previous life can not be traced the germ.† The ideas of youth, that which it brings forth, not knowing itself the origin, are often enough a crude conception. But it is the raw material which the mentality of later life subsists on. Old age is psychologically as unproductive as physiologically; it draws in deliberative repose the sum of the items of youthful productivity, which the more were borne amidst storm and passion, the more they went beyond the limit of the past, and revolutionizing their present were the forerunners of progressive future.

And this coincidence of the results of physiological and psychological research goes far to prove, that the treatment of the mind, in its healthy state as well as in its disease, can not be correct, unless it is based on principles which obtain as well in bodily as in mental regard. And it must be said at once here, that the whole prevailing educationary system is at fault, getting in few instances only in accordance with the teachings of science. The absurd traditional dualism of mind and body has led to one-sided culture of either the one or the other, without any regard to the identity of the world, as far as its intimacy is concerned, and disease, morbid monstruosity has resulted from the unnatural disunion. But if fond-hearted philantropists get startled at the fact disclosed by unrefutable statistics, that insanity is on the increase in direct proportion to the increase of civilization, they may be consoled; it is not the culture of the mind which causes insanity, a relation, which, if real, would imply a shocking absurdity in nature, but the abuse of the mind, by a shocking absurdity in man, who by his educationary wisdom tries to supply nature, and supplement it artificially.

The natural course of things, warranted by the laws of biology in sound physiological and psychological reasoning, is the incipiency of intellectual life by the use of the five senses, and this rule, even, is insufficient in the bodily scope it implies, if not interpreted right. The use of the senses does not mean only the culture of seeing and hearing, etc., but its meaning includes the exercise of the whole body. The sense of sight can not be developed, unless the eye, in considerable distances, changing with close scrutiny of minutes, be given a chance to develop its faculties in the various directions in which they are given man by nature; the sense of hearing can not be educated into the fineness which civilized man has taken the sickly custom to look at as the attribute of savages and brutes, unless brought into habitual relation with the diversity of sounds which in greatest diversity as to quality and quantity nature alone can produce in wood and meadow, on heath and main, and the sense of touch, in order to be in a healthy person what we are so sillily surprised to notice it in the blind of civilized society as well as in an Indian, needs not only exercise in a digital *tactus eruditus* or delicate professional touch, but in master-jumps, in which the whole weight of the body is brought to mental consciousness by the striking home of the action of the feet in the very motor-center of the big toe.

The development of the forces and faculties of the body, which by the fragmentary biological education of school-teachers, who can employ a room infected with sewage emanations for their weekly conferences on school-hygiene,* is looked at in the light only of heroic antiquity, is directly conducive to the soundness of thought. It is impossible, without this development of the framework of the mind in the bones, muscles, ligaments, to develop the mind, the intellect as well as the soul, and this not only because the exercise of the bones, the marrow of which helps to make red blood-corpuscles, is as necessary for cerebral nutrition, as that of the joints is indispensable for the good function of the lymphatic glands, whose plexuses are located by nature in the joints for reason of the beneficial friction which they should receive there and which is so necessary for their being subservient to healthy blood-supply, but because it tends directly to develop intelligence, especially that intelligence, which is the real one, which is founded on soundness of the mind. "A comparison of the development of even man's brain reveals the fact, that, in its earliest stage, it is scarcely, if at all, distinguishable from that of any of the lower vertebratæ. There is a period when even this, the most convoluted of all brains, is as smooth and devoid of gyri as the brain of a frog." † And if this fact on the one hand is a confirmation of the great law of evolution, this, its deeper sense, is corroborated by the specific development of the human cerebrum, which shows that the size of the latter and its proportion to the coarser items of human anatomy "stand in a closer relation

* "Pathology of Mind," p. 17. † Arthur Schopenhauer.

*Annals of Hygiene, Vol. I. †Wesley Mills, Animal Physiology, p. 543

than we have been wont to believe,"* and which we should take as a hint in the theory of artificial development. It is the animal part of the mental faculties which should be brought out first, in order to substantiate in a proper foundation the subsequent humanization. "That the size of the brain as well as its quality can be increased by use, seems to have been established by the measurements, at different periods of development, of the heads of those engaged in intellectual pursuits, and comparing the results obtained by similar measurement of the heads of those not thus specially employed."† But just for that reason, there should be no skipping of antecedent conditions intended by nature as previous in harmonious development. "The medulla may be regarded in some sense, philogenetically, as the oldest part of the brain. In it are lodged those cells (centers) which are required for the maintenance of the functions essential to somatic life."‡ That is why in infancy, childhood and even youth, the care bestowed on the free function of the vasomotor-nervous system is of so paramount an importance, and should be a preliminary stage to all direct stimulation of intellectual function in the more restricted sense of this term. "Recent investigations seem to show that the development of the ganglion cells of the brain takes place first in the medulla, next in the cerebellum, after that in the mid-brain, and finally in the cerebral cortex."§ And this result of physiological analysis is so forcibly endorsed by the educational failures due to an ignoring of the said climax, that we should be cautious in anticipating, by educational fineries, results, which nature intended at a much later period, than they are, hot-house-style, produced in so-called civilized society, in the poor victims of its unwholesome constitution. For reason of the region of our highest intellectual function, the cortical substance of the frontal lobes, being dependent with its substance, the bodily development of its very being, the quantity and quality of its structure, on the preceding physical development of the ganglia, it is the exercise of the bones, muscles and their presiding nerves, subservient to this physical development, which must be begun with; without it the higher functions of the intellect are cut short or made sickly in their utterance, because this function, as a mental process, can not proceed, unless there be a body to it, and this very body in its growth is stunted, if the development of the whole organism is not begun with at that region the nervous supply of which is concentrated in the subcortical centers.

Mentally the genetical relation between cortical substance and ganglionic development is more immediate, even. Although it is a fact, that in man the præfrontal lobes are subservient principally to abstract thought, and the formation of language in which it is embedded, it would be a mistake to believe it restricted to such function. The higher animals are not without præfrontal lobes, and being provided with them in proportion to their intelligence, it follows that they are supplementary to the functions of the sensorium. And practical observation corroborates this by ample illustration. While in a hen, in a cow, with inferior cerebral endowment, there is hardly any deductive ability, save in connection with the acquisition of food, which makes all animals keenest in the exhibition of intellect, in the elephant, the most intelligent of all animals, and also the ape, the shape of whose brain comes nearest to that of man, intellectual conclusions are notorious, which refer to feelings, and come very near to calculating combinations or are these themselves. And this, by analogy of the biological points, goes far to prove, that, in man, by the exercise of the body and implied culture of the senses, and more specially by particular attention to the latter in a system of training of the same, the very faculty of abstraction is cultivated, if not in itself, or as a function, so at least as a mental power, not kinetically, but potentially, so as to be ready to be called into play at a given moment of spontaneous development or urging educational stirring. And it is precisely at this point where the dangers of hot-house schooling come in. If it is a truth, which eager philologists, like Professor Mueller, of Oxford (England), must be excused, for the sake of its importance, to dwell upon over-abundantly, that there is no thought without language, it is for that not the less true, that there is profusion of language without thought, and that thought, in order to be sensible, must, with the very word in which it is embedded, be psychologically amenable to treatment, that means to say, lead in its analysis back to the sensory impression, the symbolic representation of which, as a generalization, or a class, was the only object of its creation. All learning or other educational influence on the side of language, words, is liable, therefore, to unsettle the mind, to create thoughts without sensible foundation, or draw a sum of intellectuality without previously establishing the factors of their constituency, and not only the mad ideas of insanity, but all nonsense consists in a disproportion between concrete images of the world, and the abstract notions formed with reference to them. Either there are abstract notions, or ideas, which are not borne out by the sensory impressions of which they are meant to be the reflective knowledge, or there are concrete images of the world built up in the sensorium from data of the senses without a critical warrant from the reasoning faculties of the præfrontal lobes. And sound apperception is going on only where perfect harmony is upheld between the two kinds of intellectual actuation. That is why there is in the world often so little of it. For, the number of

* Id. ibid., p. 546. † Id. ibid., p. 544. ‡ Id. ibid., p. 545. § Id. ibid.

men who neglect this harmony is very large; most people do, even, not know it as a requisite of sound intellectuality, and a great many use their utmost exertion to sin against the rules which it implies. That is why education has so much to do with the frequency of insanity cases, and why the kind of bookish civilization, of which our times boasts so proudly, is more apt, as far as the alienation of the mind is concerned, to create mischief than to promote the welfare of mankind.

Some examples will serve to place this theory beyond the doubt of any one who wants to see clear in this matter. Suppose, a father, walking in the night with his little boy over a graveyard and seeing a white object more or less of the shape of a human person, tells his child: "I wonder what that is, let us walk up to it, and examine;" and another one, who, on apperceiving such a figure, takes to his heels, and hardly heeds his homunculus. What will be the difference in the effect upon the children? In the first instance it will be a precedence, which will cause in the child as much coolness of mind, as it will be in the same an encouragement to inquiring critique. In the second instance a foundation will be laid for cowardice, fright and superstition, which it will cost dear to ever eradicate out of the young head and heart; it will remain in the latter, even, if later intellectual influence should banish it from the field of abstract thought. On the other hand, the difference of action in the two fathers finds its explanation, in the one in the harmony between abstract thought and the concrete images of the sensorium of which it should be only the controlling reflection, and in the other one in the lacking linkage between the idea of a spook and the verifying apperception in the sensorium, constituting in him what made him run, superstition.

Among the sane, even, if a passionate will, as obstinacy, meddles with it, something resembling madness very nearly can be produced:

> ' . . . When we in our viciousness grow hard,
> (O misery on't!) the wise gods seal our eyes;
> In our filth drop our clear judgments; make us
> Adore our errors; laugh at us, while we strut
> To our confusion."
>
> —SHAKESP., ANT. AND CLEOP., III., 11.

And no less the alienation of the mind will meander between the said scylla and charybdis, a very instructive example being the case of Dr. Skae's general paralytic, related by M. Audsley,* "who thought himself king of kings and had other characteristic delusions of grandeur, and who was most lavish in presenting millions of money," but who was very particular in keeping intact and to himself £1 3*s* 4*d* he had in the savings bank. "Moreover, he calculated interest at twenty-five per cent. on his supposed wealth, and made a mess of it, but he calculated the interest on his actual property at five per cent. and correctly." Now, then, how could the selfsame individual, in the one case be insane enough to suppose himself the owner of uncounted millions in the Bank of Scotland, increasing at an extravagant rate, and in the other have all the prudent moderation of a *bonus paterfamilias*, who not only saved his earnings, but is modestly satisfied with the rate of interest which is customary in banking institutes? The solution of the puzzle is, that the lunatic, in forming an idea of his real investment of £1 3*s* 4*d*, did not miss the linkage between the concrete apperception in the sensorium and its reflective abstraction in the præfrontal lobes, because, in carrying his money to the savings bank, the lively image of the real process of deposition kept his reflective faculty from running wild with its abstract notions of the business. In his ideas about the millions in the Bank of Scotland and his concomitant grandeur, however, this linkage was left to his imagination. Owing to a disproportionate development of his faculty of abstraction, he was liable to form extravagant notions, and he indulged in the possession, up to manical exaggeration, unchecked by a habit of looking for a practical measurement in the concrete bounds of the sensorium.

Other cases of insanity are as readily explained by our theory: "A poor woman, Esther Griggs, was brought before the Marylebone police-court, charged with throwing her child in the night out of the window into the street."* She told to the sergeant "that she had been dreaming that her little boy had said that the house was on fire, and that what she had done was with the view of preserving her children from being burnt to death." Now, then, this was acting on the promptings of abstract thought without any control by the indications of the sensorium. The woman, in doing so, was decidedly out of her mind, for perfect mentality is conditioned by the equanimity of intellectual perception. But the writer saw himself, in a house of which the roof was on fire, various men, volunteering in the work of saving, whom any physician and any court of law in the world would have pronounced persons sane in mind, but who started to fling the sashes down in the garden, in order to save them from burning up, and looked quite surprised, when others, who had their wits better about them, stopped their uneconomical assistance.

"Martha S—— was a respectable young woman, seventeen years of age, in the full possession of her mental faculties. Having occasion, one evening, to pass through some fields near the town where she lived, she was assaulted and violated. *From that hour she never spoke.* She became completely demented, staring vacantly about her, answering questions incoherently, tossing her arms about like an idiot child. She lived nine years in this deplorable condition. A post-mortem exam-

* Pathology of Mind, p. 440.

* Bucknill and Tuke, p. 266.

ination was made. The brain was well formed, but there was a somewhat softened state of one portion of it; a condition probably of recent date. Beyond this nothing worthy of note was observed. The outline of her face and head contracted remarkably with that of a true idiot. She seemed like some form discovered among the ruins of Pompeii, suddenly arrested in the midst of health, and struck in an instant with mental death,"* Now, then, the extravagance in the resentment of the suffered outrage in this case was doubtless owing to eccentricity in the idea formed *in abstracto* of female innocence, the stamp of virginity, an eccentricity which could not have occurred, if the reflective knowledge had been kept under due control of the pertinent impressions of the sensorium. If, instead of rape having been committed on the unfortunate girl, a hand had been cut off her, she would not have gone crazy. There would in her the mishap not got intensified by a feeling of guilt, or dishonor, which in the case as it was created in the mind of the girl the devastation. There is no sense in the idea, that the integrity of the hymen is so overweeningly of a moral character, as to be the condition of the moral integrity of a girl, and its loss the loss of this integrity, and altogether different from the loss of a limb. The girl having done all she could to keep off her aggressors, if she was overpowered, there was no sensible reason of any specific resentment of a maddening character, and such a one would not have occurred, if the ideas of innocence in the girl had not by educational eccentricity been exaggerated. The darkness in which most girls are kept about themselves, with nothing but ideas of virginity, enhanced usually by some hairbrained poetry, and without any sensory knowledge, of which these ideas, in order to be true, can not but be the abstract reflection, puts them in a mental condition exceedingly apt to run out in craziness, even if the exciting cause of the latter is not connected with pertinent points; the intellect by such senseless provocation of abstract imagination gets unsettled, and is by any commotion in the ventral cavity and subsequent nervous irritation more easily overthrown. The writer knew a girl, who, in a fright, asked her mother whether she had lost her innocence, because, in dancing with a strange gentleman, thinking he was her brother, she had made him a familiar remark. It was in blind-man's buff; she was blindfolded, and on dancing with some one of the company she was to guess who it was, and thinking for sure she was dancing with her brother, she said jokingly: "It is no use feigning, my boy!" Now, then, is it surprising if an intellect thus disposed is of little resistance, if in the course of the life its solidity, by vicissitudes of fate, be put on the test? The girl in question married a clergyman, a zealot, and after a childless matrimony of twenty-five years, and a number of sleepless nights in nursing her husband on his deathbed, she had an attack of suicidal mania which made it necessary to transfer her to a lunatic asylum. She recovered from her suicidal mania, but fell into lasting melancholy.

To the psychologist, who has acquired full intimacy with the intellectual processes and the pertinent metaphysical relation, the errors committed in the nowadays education are most egregious. The writer, when a boy, had to rack his imagination to write essays on topics he was not in the least conversant with, descriptions of journeys he never made, and characteristics of nations of which he never saw as much as a living specimen, and but for a sort of spunk which made him go his own way in spite of his professor-wiseacres, he might have been wrecked on a weak border, like yonder girl, for aught he can tell. There was, probably, in all psychiatry, never put forward a grosser fallacy than that of Moreau, "that we are mad or we are not mad; we can not be half deranged, or three-quarters, full face or profile."* While the overlapping of the edges is obvious in all disease, relative to the healthy condition, such an indistinctness of the lines of demarcation is nowhere more shading off than in the alienation of the mind, full soundness being the rare equilibrium in the constant bandying of cerebro-spinal and ventral cavity-nerve-emanations. If Condillac held the opinion that sensation embraces in itself all the faculties of the soul,† he is right only in as much as it is in sensations that the faculties of the soul must be exhibited. But it should be never lost sight of the truth, that the sensations will be according to the faculty of the soul as well as according to the outward occasion, and that the faculty of the soul can be deteriorated by baneful educational influence. In the natural course of things, it is the sensory impression, which intellectual action begins with, and the image called forth on the basis of these data in the sensorium gives subsequently occasion to the abstract notions, or classifying generalizations, in the cortical substance which is the highest function our intellect is capable of. But the order of things can be reversed by the abstracta in our reflective faculty of the brain, functionating in the præfrontal lobes, calling forth in the sensorium images of its suggestion, which are projected outside, even, and every way accommodated to the sensory apparatus, but, in lieu of being acquired by outside observation, are nothing than a fictitious getting up of sham reality. In the artist, the poet, the painter, this is a regular psychological process. But if a morbid will meddles with it, and sets the impressions down as immediately gained in the usual way, we have to deal with a psychiatric case; the healthy self-conscious imagination merged into the alienation of a disturbed

* Bucknill and Tuke, manual, p. 184.

* Bucknill and Tuke, l. c., p. 195. † Bucknill and Tuke, l. c., p. 199.

mind, which is lost in madness, not knowing any more what it does, although also as to this line of demarcation between healthy and morbid imagination there is an insensible shading off: "Brown draws one of his strongest arguments in favor of the universality of the consciousness of personal identity from the fact, that even the very maniac, who conceives that he was yesterday emperor of the moon, believes that he is to-day the very person who had yesterday that empire."*

The disastrous error which is at the bottom of the spuriousness of our civilization, as far as psychology is concerned, is in the opinion that it is abstract knowledge in which civilization consists. Hence the cramming, the immoderate straining of the memory in our schools, higher colleges as well as A B C academies. But what civilization consists in, is ability, for, even morality, if nothing than theoretical knowledge, is dead; it mocks only civilization, which is worked, realized only by the ability or the understanding in the will to practically act it. From a psychological standpoint, therefore, the erection of schools must be hailed as salvation, which were intended only as material help, in which the children, instead of learning to know something, are taught to DO something. If it had been the purpose of the founders of these schools to provide a means, to reduce the number of the inmates of the lunatic asylums, they could not have done anything more salutary and effective. And if the principals, male or female, of our A B C academies do not like to hear it, they must be told for all that, that, if there is anything in infantile education to promote insanity, it is their lesson of *definitions*. It is the rankest of all the weeds which in the elementary school sprung up from the wrong psychological principle on which they are run. By anticipating a development, which in an elementary school can not be reached anyway, it crams the præfrontal lobes with airy stuff without any trace of sensory connection. It is from such an artificially one-sided development of the reflective faculty of the intellect, that *aboulie* springs, or that curious condition of indetermination, where a person remains in bed because of the dilemma, in rising, whether to put on the old or the new dress, the yellow or the brown coat. It is from such an artificial culture of an *embarras de richesse* in motives of action, that the condition of mind springs, where human persons bark like dogs, or neigh like horses, mental infirmities, which are not possible where by judicious culture of the intellect the agencies in the latter were exercised in their right proportion, the one by the specific propriety of its function controlling that of the other.

A very noteworthy remark, however, makes Maudsley,† in reminding of the loss of impulsive heads, which the world sustains, if the prevailing habit keeps on, to hunt for lunatics, as in former centuries by despotism a sort of detective mendogs, with a congenial scent for revolutionary sentiment, were kept, to find out the poor victims of state-craft. There is a set of shallow-minded people, who suspect insanity in every person of uncommon originality. They are a class, which reminds of the stratagem of Dante, in his divine comedy, to invent a medium compartment between hell and heaven, because, while this shallow-minded mediocrity was by far not virtuous enough to merit heaven, hell would as well spurn their reception, because if they were no sinners, it was not by virtue of righteousness but only from lack of pluck to meet temptation. It is this shallow-minded mediocrity who are sure to fail in the treatment of the alienation of the mind. Following their "habit of looking upon insanity as a special and definite thing, which either is or is not, and which, if it is, puts the sufferer at once out of the category of ordinary men,"* and "unmindful that we are dealing not with a constant entity, but with a multitude of insane *individuals* who manifest all degrees and varieties of unsoundness,"† they are intellectually as little able to diagnose in their patients the pathological point of successful therapeutical aggression, as to mobilize in their metaphysical interior the sympathy from which springs the main armature of medical help. If the TIMES, in its recent editorial, could dwell with praise upon the curative results of the lunatic asylum of Middletown, N. Y., we make bold to assert, that such an achievement is in the first instance due to an unshaken faith of its chief in the curability of insanity. If in a lunatic asylum prevails the vulgar standpoint that the mission of the institution is essentially one of preventive police, the very underground of therapeutic action is annihilated. Then the psychiater ranks on a level with the rabble, who think to vindicate their own degree of rationality in proportion to the degree of fanaticism, with which they keep at arm's length the thought that morbid alienation of the mind is homologous to human error, and will not even try in good earnest to initiate itself into the pathological condition and the means of their restoration to health. Again, if the TIMES, as to the management of things in the asylum of Middletown, N. Y., could point to the harmony in the treatment of the insane there as the main lever of its success, we may claim it as a practical endorsement of our own theory. If the Middletown Asylum wants to be a hospital like any other hospital, the scientific reason for this is, that insanity is a mental disease, but with a bodily feature to it, the mind never functionating but in and with a bodily faculty. If the Middletown Asylum wants to be also a school for the insane, the scientific reason for it is, that there is in insanity a peculiar reaction of the mind upon the body, which places the ailment

* "Philosophy of the Human Mind," p. 83. Bucknill and Tuke, p. 199.
† Pathology of Mind, p. 28.

* Maudsley, l. c. † Id. ibid.

beyond the scope of exclusively substantial remedies, and requires in a judicious way a methodical inroad upon the alienation itself. And if the institution wants to provide a home to the insane, it is, because insanity is not simply intellectual derangement, but an *égarement* with moral roots to it. Any attempt to restore a lunatic patient to health again is, therefore, *a priori* doomed a failure, if the disorder in the positively metaphysical exhibitions of the patient be not treated along with the intellectual shortcomings, and both together with due consideration of the conditions obtaining in bodily regard. This harmony in the treatment is the indispensable highway to success. It is the *conditio sine qua non* of its totality. As the word alienated with great pregnancy expresses it, the insane are not themselves. But how can they be restored to a happy integrity of their identity, except by finding in their reason the link again with healthful sensuality, in which is exhibited sound individuality?

It is no doubt exceedingly fortunate, that examples like that of the Middletown Asylum hold out a hope of general progress in psychiatric practice. But as the world goes, the homes, where infants are nursed, and children educated into madness, are more on the increase, than the lunatic asylums, where adults are cured of it. Hence, psychological prophylaxis in society, more yet than psychological medicine in lunatic asylums, is what our age stands in need of.

THE END.

## ON DIABETES MELLITUS.*

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IN the treatment of diabetes there are a number of things to take into consideration outside of the use of drugs. Plenty of good pure air is a powerful adjuvant, and if this is not obtainable, as is too often the case in many of our larger cities, the inhalation of oxygen in combination with nitrogen-monoxide and atmospheric air will in many cases be of great advantage to the patient.

If the nature of the disease be considered, it will at once become apparent that anything which will improve the general condition of the nervous system and at the same time assist the liver and lungs in performing that portion of their work which pertains to oxydation will be of decided benefit. Such an agent is oxygen. It is better that the sugar should be mostly oxydized before it reaches the kidneys, indeed the sooner the better, for there can be no doubt that the presence of an excess of sugar in the general circulation is injurious to the organism.

The derangement of the circulation of the chylopoietic viscera which is almost always present, may be much improved by proper systematic exercise. The general state of the patient is also improved, since digestion and assimilation are made more perfect. A very simple method of exercise which at times is of rare benefit, is to have the patient, when able, hang suspended by the hands from a bar or rings overhead sufficiently high to clear the feet, except in women and weak men, when as much of the weight may be held by the feet as necessary. Let this be repeated from five to twenty times a day, the patients keeping themselves suspended from five seconds to a minute at a time according to their strength. When they loosen their hold overhead let them take half a dozen full inspirations (which they will have a tendency to do) and they have gone through an exercise which, as I said, is often of incalculable advantage to them.

The circulation throughout the entire system is improved, and especially that of the portal system. The amount of oxygen (of such prime importance) is increased, the heart is strengthened and digestion and assimilation improved and thirst lessened.

I have seen all this occur more than once in practice where the patient faithfully carried out instructions. Once or twice a day, or fifty times a day, for two or three days will not produce any decided results, but if persistently followed up every day as directed, there are few diabetics who will not be benefited by it.

But I warn you that you will find great difficulty in getting your patients to follow out systematically any such course you may lay out for them unless it be the taking of drugs; they think drugs can and *must* do all. The anecdote of the patient who went to a celebrated French physician for treatment will apply to many persons you will meet: A young man all broken down through a course of dissipation, called upon a noted physician of the French capitol and telling him his ills, asked for relief. The doctor, having ascertained what the patient's habits had been, told him he could make a well man of him and therewith laid down a set of hygienic rules to be followed, assuring his patient that if he did so he would soon be entirely cured. The young fellow looked at the *savant* in disgust for a moment and then said, "Any d——d fool would know he'd get well if he did that, but I don't want to do that; I wan't to do just as I have been doing, and have some medicine to cure me." Too often will you find patients who if they do not say what the young Frenchman did, they think it and act it.

There is no diet which is a specific for a given disease, any more than there is a specific remedy for the same. It is a mistake I am sure too, as soon as one is assured a patient has diabetes to put him upon a cast-iron diabetic diet, so-called. Of course it seems wise to take away these foods

*Clinique*, Concluded from page 140.

which are converted largely into sugar, but this must be done with discretion. Certain fruits and vegetables which contain more or less almost free sugar, or at least elements readily convertible thereinto, are at times of the greatest benefit to the patients. This may be in one or two ways. Thus the functional hepatic derangement may be overcome to some extent by the action of the fruit acids and in this way help to restore the glycogenic function of the liver when it is at fault, as it often is in diabetes.

You will remember that I told you that a lessening or lowering of the alkalinity of the blood almost always aggravated diabetes, causing more sugar to appear in the urine, and that I explained to you how Jaborandi lessened the sugar in the urine by increasing the perspiration and thus eliminating the acid salts of the blood. Now, at first thought it may seem strange for me to recommend the acids of fruits, for even though they may stimulate hepatic action, their secondary effect in the way of lowering the alkalinity of the blood would apparently negative all the good they might otherwise do.

In order that there may be nothing paradoxical in this, let me impress upon your minds that almost all, or indeed all fruit acids, are converted into alkaline carbonates in the blood. They retain their acid property just long enough to produce their stimulating effect upon the liver, and then enter the blood as carbonates. Bear this fact in mind and it will often help you out in prescribing a diet in diseases, other than the one under consideration.

As you are probably aware, the stereotyped diet for diabetic patients, is meat in some form, and skimmed milk. No doubt as a rule, a milk diet is of great benefit, if not a necessity, but many times it fails to do the good it should, through not being properly administered. There are many patients who if they take from one to three glasses full of milk a day, will complain of its making them "bilious," that is, causing the tongue to be coated, the breath foul, the bowels constipated, and a general feeling of languor and depression. When a patient is so affected, and thinks he can not take milk, let him have freely from one to two quarts daily, and the symptoms complained of will soon disappear, the bowels will move freely, lessening the strain upon the kidneys and gastric, hepatic and intestinal catarrh will if present be much improved if not entirely removed. I have seen this illustrated time and again, viz.: that patients who could not tolerate milk at all in small quantities, improved wonderfully when put upon almost an exclusive milk diet.

The benefit to be derived from restraining the patient from eating any bread is problematical in some cases, and where there is great craving for it, as often occurs, it is best to let them have a reasonable amount, at least part of the time, as the feeding them to satiety upon some one thing to the exclusion of food greatly desired tends decidedly to lower the general vitality, which we can not afford to do in either diabetes or Bright's disease.

In order to get the best results from diet, each case must be carefully studied and individualized, just as much so indeed as in selecting a remedy. I have been long in the habit of allowing my diabetic patients a more generous and varied diet than is usually done by physicians, though carefully noting the effects in each case.

When the various causes of the disease are considered, it does not look rational that one set article of food, be it milk, meat or what not can always be indicated as best. I have made some of my best cures of diabetics in cases where I did not restrict the diet from first to last, except to the extent of not allowing them to overeat, nor to make use of food obviously not good for any one.

There are a number of foods on the market prepared especially for the use of diabetic patients, each one claiming some special merit. Gluten and almond bread are thought to be of benefit in some cases.

It is impossible for one to enter into the details necessary to outline the treatment for individual cases. There is one thing of importance in the treatment of diabetes, however, "I ought to tell you," and that is the imperative necessity of keeping the skin in as healthy a condition as possible. Frequent sponge baths and dry rubbings are of great service. When the stage has arrived wherein the thirst is intense and the skin dry, a bath once a day in tepid water, the patient remaining in the bath from five to fifteen minutes, will often relieve the thirst and lessen the discharge of urine. A teaspoonful of spirits of ammonia added to the water will often be of much benefit, for reasons I shall not stop to give at present.

As you remember, I told you in almost all cases the portal circulation is deranged. When the patient drinks so much water the portal vessels become overcharged and a train of symptoms and evils are the result which are to a great extent avoided when the water or a considerable quantity of it is taken into the system by way of the peripheral venous radicals.

In addition to the remedies indicated, see that your diabetic patients have plenty of good air and water, enough of wholesome food in reasonable variety; if able, a certain amount of light exercise every day; keep the skin healthy by frequent rubbings and baths; keep the extremities warm, and prevent anything like general chilling of the surfaces as much as possible; and they should avoid all mental labor and worry, especially about their own condition and prospects. I never allow the patient to make use of a urinometer or to test his own urine lest he should worry over it and thus retard his recovery.

# CLINIQUE.

## CLINICAL CASES.

By Egbert Guernsey, M. D.

**Herpes Zoster.**—This disease is undoubtedly a neuritis from reflex or traumatic origin. When found in children, where it is the most common, it is usually of reflex origin, such as gastric derangement or the effects of cold or teething, and is generally of short duration and attended with but little if any pain, but where it is traumatic in its character and developed in persons further advanced in years it is frequently one of the most painful and obstinate troubles with which we have to contend, often yielding to nothing but a change of air and a general building up of the nervous system. In the latter case the internal use of drugs seem to be of but little if any avail, and the external use not unfrequently acting only as palliatives.

A little more than a year since a lady in middle life, full-blooded and of large size, whose nervous system had been prostrated by mental anxiety, bruised the end of her finger with a blunt instrument. In a few days the finger became very much swollen and the pain so excessive as to prevent sleep. A line of inflammation well marked run up the arm along the track of the nerve nearly to the shoulder. The pain in the entire arm extending over the shoulder down nearly to the waist was at times lancinating but generally of a crushing, gnawing character, increased by pressure or the slightest movement. The zoster extended from the bruised finger up the front of the arm, and in large angry patches on the shoulder and upon the upper portion of the back. The indicated drugs were carefully studied and administered, both internally and externally, but the only one from which I could see the least benefit was grain doses of the valerinate of zinc. Sleep could only be obtained by the use of phenacetine and chlorodine. Tonics produced aggravation, and it was only after months of suffering the later portion of the time all medicines being discontinued except the occasional use of the galvanic current, that life became even possibly endurable. Even now, more than a year after the attack, the pain in the finger is sometimes severe and the appearance of zoster slightly perceptible on the hand. The best surgical advice was against any operation upon the finger as not likely to be productive of benefit. In looking back over the case now I can not point to a single drug which produced more than a palliative effect and attribute her present improved condition to the building up of her general system, travel on the ocean and among the mountains and the absence as much as possible of every form of care and mental disturbance.

In looking over the literature of this subject I find that all agree that it is a neuritis of a reflex or traumatic origin, and that internal medication, except galvanism, is but of little avail. The latter remedy will generally relieve pain after the acute stage has passed, but it is doubtful whether even this is anything more than palliative.

Dr. Buckley, of this city, one of our most eminent specialists in skin diseases, says: "I am confident that galvanism will give great relief in zoster. My ordinary treatment is to envelop the part as tightly as possible with a linen or cotton cloth bandage, the inner surface of which has been dusted with starch, and then laid on so that there is a slight layer of starch next the body, the cloth being sowed on tightly, making a perfectly skin-fitting bandage. This dressing is not touched for a week."

Dr. Fox says: "I have tried nearly all the plans of treatment mentioned in the books and find them unsatisfactory. I have yet to see the first instance where an internal remedy has produced a notable effect in the relief or cure of zoster in a series of cases." Dr. Fox recommends strongly the use of the galvanic current.

Dr. Bronson, of this city, recommends an external application of flexible collodion or the solution of gutta percha and chloroform. Dr. Howe, of Boston, applies thin strips of cork, binding them on with plaster. Dr. Morrow agrees with the statement I have previously made that the intense neuralgic pain which precedes the development of the eruption and which may last long after the eruption has disappeared, is very much more apt to occur in people of middle and advanced age. He recommends what I also tried in the case related above with temporary relief, the hot water bag along the middle of the spine. It is very evident that if any relief is to be obtained from drugs in zoster we must study their specific action upon nerve tissues.

**Infantile Diarrhœa.**—A very interesting and suggestive case has recently come under my observation in a child about a year old who thrived tolerably well in nursing, but after it was weaned rejected milk and all its preparations as something absolutely indigestible and almost poisonous. The milk would be thrown up in thick curds with excrutiating gastric pain and the movements attended with great flatulence and pain. Cocoa for a few days would apparently digest, also scraped meat when these too would be rejected. The various cereals seemed to turn to acid, giving rise to the ptomains which act as toxic poisons. With the mother, who is of exceedingly delicate organization and a stomach so sensitive as to require the utmost care in her selection of food, I had given on her recovery from fever, *matzoon*, and found it, on account, possibly of the lactic acid it contained, of great help to digestion, and very nutritive. Acting upon the suggestion obtained

from experience with the mother, I gave the matzoon to the child with the most satisfactory result. The vomiting and purging ceased, the digestion became perfect and the flesh and color rapidly returned to the pale and emaciated child who had almost died from starvation. The appetite was insatiable and three or four pint bottles of the food were devoured a day. Wishing to leave town for the summer and finding it impossible to get the matzoon in the country and thinking the lactic acid was the prominent factor in the process of digestion, the child was placed on clappard milk and continued to thrive. Returning to the city the clappard milk, made from the city milk, was followed by severe gastric and intestinal trouble and had to be discontinued. This condition was stated by the mother to a former chemist of the health department now in the employ of one of the largest food manufacturing companies in the city, who said that most of the milk delivered in the city had been treated with something to check decomposition, and that the milk when it reached her hands was on the very point of decomposition, although apparently sweet, and the clappard milk obtained from it was entirely unlike that obtained from the fresh milk in the country. The child has now returned to the scraped beef and the matzoon. It is a question worthy of careful trial, that even in the country in those cases where milk is thrown up and passed from the bowels in hard curds, if the trouble may not be prevented by adding the lactic acid of commerce in larger or smaller quantities as may be needed, or giving it as clappard milk with the addition of a little sugar.

## CONGENITAL ABSENCE OF BLADDER, DOUBLE UTERUS, VAGINA AND OS WITH THE ABSENCE OF EXTERNAL GENITAL ORGANS.

BY I. W. MACLACHLAN, M. D.,

*House Surgeon Homœopathic Hospital, Ward's Island.*

IN making an autopsy on a patient who died in this institution July 21st, 1890, I found the following anatomical curiosity:

*History.*—Case, Fannie S., age 20; admitted to hospital June 26th, 1890; parents dead; heredity unknown. Since birth has been troubled with incontinence of urine, which dribbled from two openings in the lower abdominal parietes, directly over the vagina.

The urine has kept the parts constantly wet, more or less passing into the vaginal orifice, causing a leucorrhœal discharge during the past few years. Owing to this terrible affliction, she was unable to obtain work, as a servant, and has spent most of her life in the different charitable hospitals in this city.

She began to menstruate at fifteen years of age, and the menstrual periods have been regular since that time. The menses not appearing while under my care, I am therefore unable to say whether the flow came from both halves of the uterus or not.

When admitted to my ward, she complained of a constant and severe pain in the lumbar region and the right side, which was aggravated at the menstrual periods. She was troubled with obstinate constipation, sleeplessness, loss of appetite, extreme thirst, constant nausea, vomiting, incontinence of urine, and there was at times partial retention during the last two weeks. The analysis of the urine showed the quantity greatly diminished, a large quantity of albumen, pus cells, blood, and tube casts. For two or three weeks I had fastened a soft-rubber catheter in the orifice of the right ureter to keep the parts dry; one morning, to my surprise, the catheter had disappeared and could not be found. The only explanation the nurse could give, was that the rats had carried it off. I was quite sure it had passed into the ureter, as the pain on that side was much aggravated. I made exploration, but was unable to discover it. One week later, while the nurse was bathing the patient, she noticed a dark object in the orifice and drawing it out found the catheter, which surprised me somewhat. It was very evident from the condition of the kidneys that the irritation of the catheter did not hasten the patient's death.

*Post mortem appearance.*—Height, four feet ten inches; measurement of chest, twenty-eight inches; abdomen, twenty-five inches. Face very broad, with a slight growth of hair on the upper lip. Body fairly nourished. Breasts but slightly developed. Heart weighed eight ounces. The aorta was slightly atheromatous; valves competent. Right lung weighed eleven ounces; the left, seven ounces. Both lungs emphysematous and congested. Liver weighed thirty-eight ounces; capsule adherent; nutmeg appearance throughout its substance. Spleen normal. Acute inflammation of the stomach and small intestines. The bladder was absent, with no traces of its ever having been present. The ureters were normal in length, and passed through the abdominal parietes, between the pubic bones. They were two inches apart and one inch above either side of the vagina. The orifices were the size of goose quills. The right ureter was greatly distended, varying from one to one and one-half inches in diameter, serving as a partial reservoir capable of holding several ounces of urine. The left ureter varied from one-fourth to one-half inch in diameter. Right kidney weighed six ounces; capsule adherent. Kidney filled with small abscesses, varying from the size of a chestnut to a walnut, containing pus and blood; dark pigmentation throughout the entire kidney. Left kidney weighed three ounces; capsule adherent. The center of the organ was contracted to one and one-fourth inches in circumference, with several small abscesses

similar to those in the right kidney. The pyramids of both kidneys were destroyed. There was a very peculiar malformation of the pelvis. The pubic bones were apparently normally developed but disconnected from each other by a space of five inches. This deformity caused a wide separation of the limbs, giving her a peculiar gate when she walked. The transverse diameter of the anterior superior spine of the ileum to the spine of pubis, was five inches; transverse outlet of pelvis, six inches. Circumference of hips, thirty-three and one-half inches.

All the external genital organs were absent. There was a complete double vagina divided by a longitudinal partition, or thin septum of mucous membrane. The long axis of the vagina was transverse, or, across and between the pubic bones, measuring one and one-half inches. The entrance to the vagina was through a small fleshy band, the edges of which did not meet.

The development of both vaginal canals was rudimentary and of equal size. The length of each was one and one-half inches, and of very small circumference. There was a cervical portion and an opening into each vagina. The uterus was two horned, with a lateral direction to each horn; the distance across, from one fundus to the other, was three and one-fourth inches. The uterus weighed one and one-half ounces, and the length of each uterine cavity measured two and one-fourth inches. Each os was slightly smaller than normal. The uterine sound could be introduced easily through the os and apparently through a normal cervical canal. Fallopian tubes, ovaries and ligaments were normal; there being one fallopian tube and one ovary for each uterus.

This case I believe to be unique, so far as I have been able to ascertain in my researches through the journals and medical works within my reach. Dr. Oliver, in the London *Lancet* for 1879, Vol. II., page 829, gives a very interesting case of apparent congenital absence of the bladder only, but I find no case in medical literature with such complications of malformation as I have described above.

## PEROXIDE OF HYDROGEN IN RODENT ULCER.

By W. T. Branstrup, M. D., Topeka, Kansas.

I AM led to think that this is a disease that is little known, or at any rate but little written about. I have looked through authors without number and when I found anything relating to this disease, it was very short and little or nothing in the way of treatment, and what I did find could be summed up in a few words, consisting mostly of acids of one kind or another, and always ending with the knife. That it belongs to the carcinoma family is hardly to be doubted, and if left to itself will, in a short time, destroy the organ to which it may be attached. Prof. Mitchell, of Chicago, has been meeting with very flattering success in the treatment of carcimona with ars. $^{2x}$ and ars. $^{3x}$ trituration, to be taken every three hours, and applied to the sore dry two or three times a day. Carbolic acid in one form or another is applied to the sore also. I have a case just *cured* that I think worth reporting. As the treatment was entirely new and wonderfully successful, being *new* and different from anything up to *date*, I think it my duty to let my fellow strugglers know how to overcome a disease that has always been relegated to the knife, and always without hope. I *never* saw a case as *bad* as this was get well. The treatment was entirely original with myself. The only thing I did that I had *seen* done before was the rubbing off the scab with a towel. This I saw Prof. Hebra use in this way in Vienna.

Mr. M. called to consult me about his *nose*, sometime in December, 1889, saying it had been troubling him for the last eight or ten months, and that a number of doctors had treated it with acids of one kind or another but, instead of improving, it grew worse all the time, about one-tenth of the end of the nose had been eaten away, and it was rapidly advancing upward. None of the doctors that had been treating it seemed to know what was the trouble. They did not look upon it as malignant, and promised to cure him in a very short time. I told him it was rodent ulcer, and that it would take sometime to cure him, but I thought it could be done, nor would I attempt to treat it at all unless he would consent to give me a fair amount of time. He asked me what I considered a fair amount of time. I said three months. He said he would give me that much time. I immediately began the treatment by rubbing the crust from the nose with a towel, using considerable force. The raw surface showed a number of bleeding points, that I touched with a wooden toothpick that I dipped into Monsel's solution, after which I sprayed the *raw* surface with Marchand's peroxide of hydrogen, using the combined hand atomizer and ozonizer furnished by this firm. I put on the *globe* that belongs to the apparatus (when the globe is attached nothing but the gas strikes the place), not finding any improvement I detached it and sprayed with the $H^2O^2$, reducing it about 50 per cent., but it did not seem to do much toward improvement. I then used it full strength, and in a very short time improvement was rapid. This treatment was strictly adhered to for nearly three months, when he was discharged cured; a very happy man, I can assure you. I don't wish you to think that I think nothing else would have cured him, but I do think there is nothing that could have done it with less pain to the patient, and more rapidly and satisfactorily. I did not give him any medicine internally for this trouble. I mention

this that credit may be given where it justly belongs. I could say much more for this same $H^2O^2$ that would be as wonderful as anything I have already said. Since I have been using it I find diphtheria banish before it as snow before the *sun*. It can be sprayed in the throat, or if the child is old enough it can be used as a gargle, reducing it about 50 per cent. with boiling water, or perhaps it would be better to say with water that has been boiled. All forms of *microbes* of whatever name will banish before it. I don't wish you or your reader to think I am infatuated with $H^2O^2$, "I only a plain unvarnished tale relate; nothing extenuate, nor set down aught in malice." Try it my readers, and you too will sing loud in its praise.

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**The Urine of American Business Men.**—(Clifford Mitchell, *Med. Era.*) Man's inhumanity to his kidneys makes countless millions mourn. This reflection has come over me after examining the urine of many men too actively engaged in business. . . . I can not fail to recognize certain points of resemblance in the various specimens which have come under my observation. The urine of the over-worked and over-fed American business man usually shows in the beginning, before any renal disease is actually present, the following characteristics:

The total quantity of urine for the twenty-four hours is greatly reduced, sometimes to half the normal quantity. The color is usually, therefore, darker than normal, and there is abundant sediment in which urates, uric acid, and often calcium oxalate may be seen with the microscope. The urine being diminished in quantity, and the acidity relatively increased, the urates and uric acid can not be held in solution as they ought to be. Estimation of the total quantity of urea will almost invariably show this substance to be diminished to a figure considerably below normal.

My method of examination of such urine is, first, to cause the urine of twenty-four hours to be collected and brought to me. I measure it in an accurately graduated jar. Next, the total solids are calculated and compared with the normal range, fifty-five to seventy-five grammes. Next, the total urea is estimated by the hyperbromite process and compared with the normal range, twenty to forty grammes. But I ascertain what would probably be the normal urea figure for each particular patient by multiplying his weight in pounds by the proper co-efficient. As I have often shown, 3½ grains to the pound is about the normal average for those between 120 and 160 pounds. In cases where the acidity of the urine is very noticeable, I estimate this by the volumetric method, and from time to time repeat the operation to observe the effect of diet and treatment.

Testing the urine with delicate tests for albumin and sugar, and examining the sediment for crystalline constituents must next be done. Perceptible traces of albumin and sugar I occasionally find in the urine of hyperactive business men, but in many cases both these constituents are as yet absent. I say as yet, for, sometimes, if all warnings are unheeded, one or the other of these unwelcome visitors in time may make its appearance. I regard persistent decrease in both fluids and solids of the urine of great significance in those who eat heartily and exercise little. It is not necessary that either albumin or sugar be present; there is enough trouble without them. When a man of average weight voids daily no more urea than we find in the urine of a delicate woman or a bed-ridden patient, it is time to cry "halt." As a rule, however, the man himself will be vaguely conscious that "something is the matter with him," though the kidney is never suspected of being at fault.

I have found that these patients with diminished urea and crystalline sediments have all sorts of aches and pains. Headache is a very common concomitant. Sleeplessness another. If I could have my own way, I would estimate the urea in the urine of every patient in the country suffering from insomnia or restless, unrefreshing sleep. Professor Dowling, in his paper on Lithemia, has commented on the same thing. Not all insomnia is due to lithemia, but many cases, apparently hopeless, could be helped were the conditions properly understood. Much bromide of potash would yet rest peacefully in the pharmacist's bottles undisturbed by apostles of palliative treatment.

When among the various persistent aches and pains backache is felt, then the patient rushes in terror to the nearest doctor and has his urine analyzed. Now is the time to put the enemy to flight, but often, unfortunately, because, forsooth, albumin and sugar are absent, the patient is told that "nothing is the matter with his urine."

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**Strangulated Hernia and Pneumonia.**—Pneumonia not infrequently follows the reduction of incarcerated hernia, and the ninety-third volume of the *Archiv. F. Klin. Chirurgie* (p. 501) contains an interesting contribution from the pen of Dr. Ed. Pietrzikowski in which an effort is made to prove the view, first advanced by Professor Gussenbauer, viz.: That the pneumonia which follows the reduction of hernia is of an embolic or hemorrhagic nature; the emboli being formed in the blood-vessels of the imprisoned gut, and diffusing themselves throughout the circulation after liberation of the latter. From his clinical observation, which is based on the history of 401 cases, the author concludes that the lung complication arises in about twenty-five per cent. of all cases, no matter whether the reduction is effected by taxis or by herniotomy, and as a rule only where the blood stasis in the strangulated intestine is not so complete as to be entirely isolated from the circulation after the operation. The author also approached this question from its experimental side by producing artificial herniæ in fifteen dogs. After these were reduced by herniotomy, he found that in ten instances the lungs contained hemorrhagic infarcts, while in six the liver was similarly affected—all of which was believed to be due to the absorption of thrombi from the blood-vessels of the liberated bowel.

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**Effects of Close Shaving.**—A writer in the *Medical Classics* looked through a microscope at a closely shaved face, and he reports that the skin resembled a piece of raw beef. To make the skin perfectly smooth requires, he says, not only the removal of the hair, but also a portion of the cuticle, and a close shave means the removal of a layer of skin all around. The blood-vessels thus exposed are not visible to the eye, but under the microscope each little quivering mouth holding a minute blood drop protests against such treatment. The nerve tips are also uncovered and the pores are left unprotected, which makes the skin tender and unhealthy. This sudden exposure of the inner layer of the skin renders a person liable to have colds, hoarseness and sore throat.

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**Nutritive Value of Blood.**—Dr. William Hunter, in the first of a series of lectures on transfusion, its physiology, pathology and practice, says that the results of the observations of various investigators upon the blood of persons who had been subjected for some time to starvation go far to prove that the blood is not the "nutritive fluid of the tissues" as it has been called, and that "to transfuse blood on account of any nutritive properties it may be supposed to possess is an operation entirely devoid of any physiological basis."

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## THE DEATH PENALTY.

THE long delay and the final execution by electricity of the brutal murderer, in Auburn State Prison, who in point of intellect seemed but little above the brute, and the terrible scene in the death chamber where the penalty was carried out may not be without some compensation in calling the attention of the public to the death penalty itself. Is there no escape from the old law, an eye for an eye and a tooth for a tooth, and whoso shedeth man's blood by man shall his blood be shed? Is this law intended for the protection of society or for the punishment of crime or both, and as the law is carried out now, could not society be better protected in some other way? The recent execution, with all of whose sickening details the papers were filled for days, has brought the matter distinctly and strongly before the public, whether in the evolution of society, no matter what may have been a man's crime, we can not put him to some better use than to kill him. Does killing a man legally, where as now every detail of the life of the condemned from the time he enters his cell till the final wrenching his life from his body is published to the world, prevent crime or does it not rather increase that morbid feeling in the minds of the depraved which pushes them on to the commission of a crime at which they would have shuddered. The public, in the light of the recent legally killing by electricity, are more fully alive to the consideration of this question than ever before, and we are very much mistaken if some positive and energetic action will not be taken in reference to the matter at the next meeting of the legislature. If it is decided that the death penalty is absolutely necessary for the protection of society, let it be studied, not from the standpoint of one of the fine arts, but the mandate of the law be sternly and quickly carried out with as little public detail and mental torture as possible. The shock which ended the mortal life of the murderer was nothing, but the mental torture of being fixed in the chair, the straps buckled one after another, the electrodes applied and the final signal must be torture beyond conception, unless it could be done by expert hands and in a few seconds of time. If we are to have any more electrical executions we trust the death dealing agent may do its work under more scientific direction than the last, when the current was passed through the thick bones at the base of the brain and the spine, the most non-conductive of any portion of the body, instead of through the hands by the way of the fluids of the body which are excellent conductors, paralyzing the heart at once. With a machine specially constructed for the purpose, some of the objectionable features of this form of killing would be removed.

## LOCOMOTOR ATAXIA.

GAUCHER reports a case of a man afflicted with syphilis in 1876. Eruptions appeared on the hands in 1880 and two years later had lancinating pains in the arms and legs, difficult locomotion and diplopia. He was treated with sulphur baths, douches and bromides, without benefit. In 1883 he was markedly ataxic, presented planta anesthesia, loss of patella reflex, and walked with great difficulty. Inunctions of mercury were ordered, with fifteen grain doses of potassium iodine three times daily. The same week, vision improved, locomotion was easier and at the end of six weeks the patient was seemingly perfectly well. This is the treatment which would naturally suggest itself to any physician when the history of the patient disclosed previous syphilitic trouble, but even where no traces of syphilis could be discovered, we have found in the early stage of locomotor ataxia no remedy which acted so promptly and with such uniform good results as the potassium iodine. This remedy we have usually given in the form of "Gardner's Syrup of Hydriodic Acid," on account of the facility of administration and also from the fact that the specific action of the drug is not naturally changed by its pharmaceutical preparation. When the iodide salt is given in its pure condition, the disagreeable taste and often unpleasant effects upon the stomach are best prevented by dissolving it

in milk. Within the past year a case, where the symptoms of locomotor ataxia were well marked, was brought under our observation. The lady was about fifty years of age, and no trace of syphilitic poison could be discovered in her previous history. The trouble could not be traced to any special cause, but the symptoms were so marked as to leave no doubt as to the trouble. Under the influence of hydriodic acid the symptoms slowly disappeared and she is now, three years after she came under our care, apparently in good health.

## MEDICAL LEGISLATION.

DR. WALTER LINDLEY, in a very eloquent and thoughtful address, delivered before the Medical Society of the State of California, in discussing the hereditary transmission of the seeds of disease producing, in the children, suffering and early death, quotes the recommendation of the State Board of Health that all superior judges, before sentencing a prisoner to the state prison, shall have him examined by the county physician to detect any signs of tuberculosis, in order that special measures may be taken to prevent the contagion of the disease extending among the prisoners, and pertinently asks, why should not the state extend its paternal care in this matter to other than its criminal population, and compel every man or woman applying for a license to marry, to present a certificate from a physician that they are free from any taint of consumption or syphilis.

There are many phases of the great social problems which extends into every branch of society extremely difficult, if not impossible, to settle with our present knowledge, by legal enactment. These questions, on account of their extreme delicacy and many complications, must be treated dispassionately and with the utmost caution, lest in remedying an evil in one direction we bring about complications and results in another, prejudicial to the rights of individuals or the general welfare of the public. We are inclined to think that many of the evils, which have been developed through peculiar conditions of society, will relax their grip and fade away more surely and with less danger to the public with the steady advance of that healthy physical and moral education, that ever increasing appreciation of the rights of individuals and communities so apparent everywhere, than if the attempt was made to read them out by legal enactment. With the survival of the fittest, society purifies itself and perhaps works less injustice than it would if it called upon its legislators to define distinctly the class eligible to marriage, in which a marked and often intelligent and refined portion of the community would be excluded. While we are called upon as physicians to use every means in our power to prevent disease and crime, may not that work be best accomplished by educating up the people to a better appreciation of natures laws and the cause of those social evils which all condemn.

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AMONG the important meetings which will be held this month, we mention that of the American Climatological Association, at Denver, on the 2d and 4th. A large portion of the three days' session will be given to the discussion of climate in Colorado and other elevated localities, when a series of complimentary excursions will be given to the members among the parks, mountains, cañons and springs of the state. The third Congress on Alcohol will meet in Christiana from the 3d to the 5th of this month. The report of the president of the permanent committee, Dr. Forel, of Zürich, will undoubtedly be a very able review of the work accomplished by the congress during the past three years. It is hoped that among the many thoughtful papers which will be read at this meeting, some light may be thrown upon alcoholism as a disease in itself viewed in the light of heredity and also its effect upon distinct organs. How much or how little of the crime and vice of society is the outgrowth of physiological defects in the organism caused by hereditary taint, and how to remedy the difficulty are questions which appeal to every one and worthy the most careful study of the scientist.

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IT IS amusing to see the air of perfect innocence with which our Old School friends bring out from time to time as new, some remedy, which now in their hands is producing wonderful results, but which has been carefully described in homœopathic literature a generation ago, and can be found in every homœopathic pharmacy and in every homœopathic medical case. One of the latest discoveries is that of Dr. Orlando Jones, in the *British Medical Journal*, of *cactus grandiflora* in heart disease which, he thinks, is likely to prove a useful adjunct to our resources, especially in asthenic conditions of the heart. Cactus has so long been a sheet anchor in certain conditions of the heart to all familiar with homœopathic literature, that the sudden bringing it before the public as something new, looks like an ignorance for which there is no excuse or a dishonesty equally inexcusable. We, of the New School, are quite willing to ac-

knowledge our obligations to the entire profession for valuable scientific and clinical facts in reference to remedies and treatment, giving in all cases credit where it is due, and this simple honesty it seems to us is much more in accordance with a catholic profession than that spirit of exclusiveness which is too often seen.

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THE condition of the public baths in this city show the great importance of having all the sanitary arrangements, controlled by our public authorities, under the direction of competent medical inspection. It has been recently found that all of the public baths, except the Battery, which have been daily patronized by thousands of the poor, are so unhealthy that the bathers are liable to contract in them not only severe forms of ophthalmia but other diseases. The water has been found not only filled with more or less noxious particles, but the bottom contained unhealthy deposits. This can hardly be avoided, except in such exposed places as the battery, under the present system of sewers and docks, where the filth pouring out from the sewers collects in and about the slips and docks. The battery is the only point along the line of the densely populated city which escapes the wash of filth borne down by the tide of both rivers and washed out to sea, and to this point at present it is clear the salt water baths should be confined. Fresh water swimming baths, free to the poor, could easily be established from the large amount of Croton water now at our disposal, in different parts of the city where there would be no danger of contracting diseases. If a portion of the enormous sums of money, now expended in public and private hospitals and infirmaries, were devoted to the prevention of disease by securing better sanitary conditions, our city, instead of ranking as one of the most unhealthy cities in the civilized world, would soon take its proper position as the healthiest. When the people insist that our sanitary affairs, including sewerage, docks and streets, shall be taken out of the hands of mere politicians and put in those of scientists who understand their business, this end will be accomplished.

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DR. LAWSON TAIT in an address before the British Medical Association made some very pertinent remarks in reference to the training of the surgeon. "Let him be grounded," he said, "in every fact of anatomy, which might, under the rarest and most unlikely conditions, aid him to appreciate the result of an injury, or a displacement or a new growth. Let him be placed so constantly alongside somatic sections that he would not only learn his anatomy, but that he would never forget it." He pleaded most earnestly that their successors should be spared that senseless grind at useless details of anatomy with which their own young memories were burdened—details he prepared himself to forget the moment the necessity for examination was over. A training in practical mechanics he contended was at least as necessary for a man, who was to operate upon his fellow human beings, as is a training in anatomy. Dr. Tait might, with equal justice, plead for greater wisdom in every department of college study and examination, in which the mind of the student is burdened with a vast amount of useless and minute detail, forgotten for lack of use as he enters his profession. As a preliminary mechanical training is of great importance with the surgeon to familiarize him with the use and delicate handling of tools, so are the practical details of the laboratory and the absolute contact with disease in clinical study of vital importance to the general practitioner.

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THE daily papers recently contained an account of the death of a boy, thirteen years old, from alcoholic cirrhosis of the liver. The boy was found unconscious in a water-closet, and died in a few hours. The case was so rare that the details of the autopsy, made by Dr. Herman Biggs, of the Carnagie Laboratory, were published in the *Record*. The child was given whiskey when only two and a half years old, while suffering from bronchitis, and having contracted a taste for it was permitted to use it when he complained of not feeling well, and for the last two or three years had taken it almost constantly. The size of the liver was increased with a markedly advanced fatty infiltration and the ordinary changes found in cirrhosis. West, in his work on "Diseases of Children," says, that 70,000 cases of children's diseases have yielded but four cases of cirrhosis of the liver, and other authors, who have had large hospital experience, agree in the rarity of the disease in children.

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JUDGING from the official report of Health Officer Davis to the Michigan State Board of Health, the portion of the state in which he resides is evidently not much in need of medical advice. He says: "There has not been enough sickness here in the last two years to do much good. The physicians find time to go to Milwaukie on excursions, some as jurors in justice courts, sit around on dry goods boxes, and buy

tobacco, chew gum and swap lies. A few sporadic cases of measles have existed, but they were treated mostly by old women, and no deaths occurred. There was an undertaker in the village, but he is now in state prison. It is hoped and expected, when green truck gets around, melons plenty and cucumbers in abundance, something may revive business. If it does I will let you know."

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THE president has nominated Col. Jedediah H. Baxter to be surgeon-general of the army in place of Surgeon John Moore, retired. Notwithstanding there are several surgeons who have been in the service longer than Col. Baxter, and in point of seniority would have a strong claim to the position, yet the experience of the nominee of twenty-three years in the administration bureau of the department has so familiarized him with all the details and the wants of the service as to make the nomination on the score of fitness one of great excellence.

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THE law in this state for examiners in lunacy was changed in 1889, and it is not now lawful for any medical examiner in lunacy to make a certificate of insanity for the purpose of committing any person to custody, unless a certified copy of his certificate has been filed in the office of the State Commissioner in Lunacy in Albany.

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**International Medical Congress.**—The Americans at the International Medical Congress found the weather in Berlin quite as hot as in their own country, the thermometer registering there, August 4th, a higher temperature than in ten years. The United States was well represented, and some of the ablest and most practical papers were read by physicians from this side the water. Prof. Virchow was elected president. The next meeting of the congress will be held in Rome. The meeting was larger than any which had preceded it, nearly eight thousand physicians being present, of which about five hundred were Americans. These meetings, like our own national meetings, are interesting from a social standpoint, in forming new friendships and renewing and brightening old ones, but it is very doubtful if any new discoveries or any very important lines of thought are brought out. In such a crowd but little attention is given to papers or discussion, but the social element freshens the mind and brightens the life with recollection of men who have become illustrious in the fields of literature and science, and stimulate to more careful work. These meetings are very well in their place, but the real scientific work of our profession will be done at home in private and hospital practice, and in the quiet of the study and laboratory.

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IN Germany and France it is a penal offense for any one but a licensed physician to practice hypnotism.

## *BIBLIOGRAPHICAL.*

THE PHARMACOLOGY OF THE NEWER MATERIA MEDICA. Embracing the Botany, Chemistry, Pharmacy and Therapeutics of New Remedies. Being the Results of the Collective Investigation of New Remedies, under the "Working Bulletin" System, Properly Arranged, Classified, Indexed and Placed at the Disposal of the Medical Profession. Issued in Monthly Parts. Subscription Price, $2.00 in advance. Single Copies, 25 cents each. Parts 1—5 now ready.

During the last ten years a mass of pharmaceutical and therapeutical knowledge of the newer materia medica has been gathered from many and varied sources of botanical and pharmaceutical information, clinical reports, physiological researches, reports from special botanists traveling in the habitats of many of the more important of the newer drugs, etc., much of which has already been published in the form of "working bulletins," but all of which is now to be arranged, classified, indexed, and eventually placed at the disposal of Medicine and Pharmacy, in book form.

Each remedy mentioned in the foregoing list will be treated in an impartial and purely scientific manner, giving, as far as possible, in the order named:

*The Botany of the Drug.*—Names, synonyms, natural order, origin, history, commerce, production, description, microscopical structure, etc.

*The Chemistry of the Drug.*—Composition, analysis, etc.

*The Pharmacy of the Drug.*—Adulterations and substitutions; pharmaceutical preparations; incompatible, etc., etc.

*The Therapeutics of the Drug.*—1. Reports of experiments made upon animals to determine the physiological action of the drug. 2. Clinical reports, pro and con, published in medical periodicals, etc.; arranged with reference to the diseases in which the drug has been tested, or with reference to the nature of its action upon the human system. 3. Resumé by a competent physician, giving indications, antagonists, synergists, physiological action, toxicology and antidotes, dosage, etc., of the drug as established by the reports of clinical and physiological investigators above mentioned.

In order to properly carry out this programme, the work of compilation, editing and revision, indexing, etc., will be under the charge of a bureau of competent physicians, botanists and chemists, and no pains will be spared to secure conciseness and accuracy.

It was at first intended not to present the work to the profession until entirely complete, so that it could be offered in book form. Realizing, however, that some time would elapse before it could be finished in this shape, and that the information would be of value as fast as completed in parts, we have decided to issue monthly, uncut sections of the volume, each of which will embrace so much as is finished up to the date of its issue, and which has not been published in a section previously issued.

When complete these sections may be bound to suit the taste of the owner, or we will receive them in exchange for a bound copy, if the subscription has been paid in advance.

As near as we can estimate the work will be complete in a volume of about 800 pages, and we hope to be able to furnish the bound books within twelve months.

The price of the work when bound in cloth, complete, will be $3.00.

The subscription price for the Parts, to be forwarded as fast as issued, will be for the set $2.00. Inasmuch as we shall hold ourselves ready to exchange a cloth-bound volume for the complete parts, if the subscription has been paid in advance, this is practically a discount of 33⅓ per cent.

Single parts may be had for 25 cents each.

Address all communications concerning this work to Geo. S. Davis, publisher, Detroit, Mich. P. O. Box 470.

DISEASES OF THE RECTUM AND ANUS, THEIR PATHOLOGY, DIAGNOSIS AND TREATMENT. By Charles B. Kelsey, A. B., M. D. Third Edition. Re-written and Enlarged. With Two Chromo-Lithographs and One Hundred and Sixty-eight Illustrations. New York: Wm. Wood & Co., 1890.

Dr. Kelsey says in his preface: "The great advances which have been made during the past few years in the surgery of the rectum and intestinal surgery generally, have necessitated many changes in this, the third edition. The chapters on the treatment of strictures, both benign and malignant, and on the formation and closure of artificial anus, have been entirely re-written and much new matter added." The high standing of Prof. Kelsey in his speciality, in which he has no superior, will attract the attention of the profession generally to the new matter which he has incorporated into the old edition, which was a standard book, while the abundant illustrations and careful description of every step of the numerous rectal and intestinal operations of which he treats, will give the surgeon a confidence in his work next to that obtained by actual classical study.

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FAMILIAR FORMS OF NERVOUS DISEASE. By M. Allen Starr, M. D., Ph. D. With Illustrations, Diagrams and Charts. New York: Wm. Wood & Co.

Within the past few years, the attention of the profession has been specially directed to conditions of the central nervous system, in making up their diagnosis and marking out the line of treatment for a large class of diseases which heretofore have been considered of obscure origin. The work under notice does not claim to be a treatise upon nervous diseases, but is a series of careful clinical studies from a pathological and clinical standpoint, in which the immense resources of the Vanderbilt Clinic have been utilized, of groups of cases and locating not only the precise position but character of central leisons. Dr. Starr's well known ability and the enthusiasm which he follows up pathological and clinical investigation, have brought out many important facts and cast much light upon his speciality.

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SAUNDER'S QUESTION COMPENDS. Part I. "Essentials of Refraction and the Diseases of the Eye." By Edward Jackson, A. M., M. D. Part II. "Essentials of Diseases of the Nose and Throat." By E. Baldwin Gleason, S. B., M. D. Philadelphia: W. B. Saunders, 913 Walnut Street.

The student and the physician in active practice are under obligations to the publisher of this series of compends for bringing before them, in the form of questions and answers, the most important points in science and art of our profession. The volumes under notice are in every way up to the standard.

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FUNCTIONAL NERVOUS DISEASES OF REFLEX ORIGIN. By Albert Rufus Baker, M. D., Professor of Opthalmology, Wooster University, Cleveland, Ohio.

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"Five Cases of Vaginal Hysterectomy in Malignant Disease of the Uterus as Recorded." By W. F. McNutt, M. D., Professor Principles and Practice of Medicine, University of California.

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"The Treatment of the Acutely Insane in General Hospitals." By W. P. Spratling, M. D., First Assistant Physician New Jersey State Asylum for the Insane.

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"A New Operation for Prolapsus of the Anterior Vaginal Wall." By Andrew P. Currier, M. D., New York.

"The New Treatment of Peritonitis." By Emory Lamphear, M. D., Kansas City.

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De L'Anesthisic Locale par injection de locaine et du bon effet de la bande D'Esmarch par le D. E. Kummer.

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# CORRESPONDENCE.

## TOLSTOI'S KREUTZER SONATA* AS A STUDY IN SEXUAL PSYCHOLOGY AND PATHOLOGY.

*To the Editors of the* NEW YORK MEDICAL TIMES:

A few months ago I remember reading a letter in *The Nation* from Miss Isabel Hapgood, who has translated Tolstoi's works, in which she stated that she had refused to translate "The Kreutzer Sonata," on the ground that it was too vile, or words to that effect. I can understand how she felt thus about this last novel of the great Russian, and how many can take up this book and feel the same about it. Perhaps looked at in one way the criticism is a just one; and yet there is another view to take of it which places the book among those of a high moral purpose, and capable of doing good. It can be looked at as a study in sexual physiology, or rather pathology, in which the writer has used all his great artistic powers to depict certain great evils in our modern civilization and their direful consequences, evils which the world has come to regard as almost a necessary part of our social fabric.

Certain it is he has not treated his subject with kid gloves; he has dipped his pen in vitriol and has not been afraid to lay bare all its worst features; he has made use of his wonderful powers of realism and brought his reader face to face with certain vices and degradations which we prefer to shut our eyes to, or worse still, to wink at, and to regard as too much a part of our human nature to make any effort to remedy.

One thing must be admitted, the writer has not clothed vice in purple and fine linen, and has not dwelt upon its seductive side and introduced scenes and characters which give pleasure to a prurient fancy, a charge which can be brought against many recent novels. Our bookstalls are flooded with a mass of erotic literature in which writer and artist vie with each other to throw a certain glamour around vice and dissipation. "The Kreutzer Sonata" can not be classed with these; the book rather finds a place in our medical library as a powerful study in sexual psychology.

The chief character represents a man of strong passions, who has given free vent to them, and yet has kept within the bounds of propriety as the word is understood in society. He has done nothing to keep him out of what is known as "the best society," and yet his life has been calculated to develop an emotional and moral obliquity which results in the murder of his wife and his own moral shipwreck. And the novelist, with a true artist's touch, shows certain redeeming qualities in the man in the beginning of his career, which, under a different régimé would have helped him steer clear of that fatal vortex into which he was finally precipitated. This is to us a very strong point in the story. Tolstoi takes occasion to depict the sexual side of society and its many abuses—its game in sexual selections; the fatal tendencies in the education of young women, especially those given up to "society" and its round of pleasures, with the utter disregard of well known physiological laws. What he writes on diet is certainly the last word in dietetics. He takes pains to show that the prevailing notions about love are far from being of a high order. Some may think that the book is a tirade against marriage. It

* The Kreutzer Sonata. By Count Lyof Tolstoi. Translated from the original manuscript by Frederic Lyster. New York: The Pollard Publishing Company.

most emphatically is not; but the novelist does show how much of the unhappiness and crime in married life is the result of false education in early life, and of many of the prevailing customs and ideas in a society whose object is the bringing together of the sexes.

The trouble is, we do not always like to know the truth, and when one has the courage to come forward and speak the truth, he is called brutal, iconoclastic, or pessimistic.

What Tolstoï has to say of our profession is not very flattering, and he tells some truths here. He has picked out certain professional abuses which were necessary to his story, and which he has made use of in a very telling way. This does not mean any wholesale denunciation, for he has elsewhere borne testimony to much of which physicians as a class may be proud of. As an artist he denounces or he praises to suit his story.

The reader must remember that it is not the writer who speaks, but the chief character in the book whose temperament, early education and downfall have given him an intense view of things, who sees only the worst side of married life and has drawn wholesale conclusions from it. He has become a raving pessimist and his denunciations are a natural consequence of his own crime and unhappiness. This was a part of the novelist's aim, but with rare skill he makes his character see and say much which every thoughtful man and woman must realize as the truth.

This is a great subject to handle in a novel, and only the great artist can in any way grapple with it. Whether Tolstoï wrote his story with a moral purpose in view, or simply as a powerful story with an artistic and human interest, certain it is, it teaches a great lesson and tells some great truths. I would not put this book in everybody's hands. There are some so constituted that it is better for them to go through life ignorant of some of its evils, and they are so situated that they can do so. With others, again, they had better know them.

Let the book be read and criticized then as a study in sexual pathology, and its good points, in an artistic and didactic way, will come out. It is from this view of it that I send THE TIMES these impressions and recommend it at least to medical readers. Respectfully,

E. R. CORSON, M. D.

Savannah, Ga., August 12, 1890.

## DR. ECCLES' REPLY.

R. V. O'Neill, M.D., Ph. D., evidently hopes to get somebody to agree with him on something when he attacks my paper published in the May number of the MEDICAL TIMES. He is evidently feeling lonely in his astronomical theorizing, as no one has ever agreed with him in believing that the Copernican system is all wrong except the Southern colored preacher, Rev. Jasper. He wants to air his nihilistic medical heresy and his entire disregard for induction in every form. No such slow, joking logic will answer for him. It is as incongruous as Guiteau preaching love for enemies, or at least he thinks it is. R. V. O'Neill, M.D. Ph. D., did not know that the lecture that he pronounced "A bitter and mendacious tirade against Homœopathic Physicians" was read by me from the printed page when he heard it and that this charge of his stands proven as far from the truth as words can well be. If he or any reader of the TIMES is anxious to discover how reliable R. V. O'Neill, M.D., Ph. D., really is as a reporter of a lecture let them send to James H. West, 196 Summer Street, Boston, for No. 24 of the *Modern Science Essayist*. In it I say: "Modern therapeutics takes note of the fact that both similars and dissimilars are equally efficient, and that therefore Allopathy and Homœopathy only partially express the truth that is at once both and neither."

To R. V. O'Neill, M.D., Ph. D., such a statement is criminal. He believes and teaches that neither by similars nor dissimilars can we reach disease. In his nihilistic code drugs are useless and worse than useless. He has no patience with the modern method of induction and insists that to advocate it is to advocate "No rule of any kind." With one fell sweep of his mighty intellect he clears out therapeutics, demolishes astronomy and confounds Bacon. He praises eclecticism and yet never gathers anything but negative results from the use of drugs. A strange form of eclecticism truly. It is curious that all such critics as R. V. O'Neill, M.D., Ph. D., never take up the points of an article seriatim and attempt to show its errors. That method is, like induction, too slow and tedious for them. With broad assertion they say the author declares so and so and then proceed to demolish not what the author really says, but what they wanted him to say. R. V. O'Neill, M.D., Ph. D., demolishes my paper in the May number of the MEDICAL TIMES by telling your readers that I once made a tirade against Homœopathy, that I declare the dominant body of medical men have no rule of practice, that ancient ignorance once murdered patients because it knew no better, that ancient bigotry once persecuted, that I belie and slander medical heretics, that my reference to logic was incongruous, that I am flagrantly inconsistent, that he has learned something from Hahnemann, that all intelligent doctors are really eclectics and that he thinks *all drugs* and *poisons* are useless in most acute diseases.

Now what is there in all this like a reply to my positions? Perhaps his mind can perceive a connection between what he says in his letter and what I said in the May number, but in all honesty I am utterly and wholly at a loss to see where it is. I can see where he sought to prejudice your readers against me by statements that were not fact and by raising class bias. In the forepart of this letter I have sought to cure him by the principle of similars while studiously avoiding the sameness of misrepresentation. I have told of his ignorance of the simplest facts of astronomy while he signed himself a Ph. D. The very facts of mathematics and physics which he would have been compelled to master before he could have secured the degree of Bachelor of Philosophy let alone Doctor of Philosophy, would forever have made it impossible for him to have ever doubted the earth's position in relation to the sun and planets. Where then and how did he ever gain the right to call himself a Doctor of Philosophy? The connection of this degree and Rev. Jasper's ideas of the solar system in one individual is as incongruous as a round square. Respectfully yours,

R. G. ECCLES.

## THE A. I. H. AND ALABAMA.

*To the Editors of the* NEW YORK MEDICAL TIMES:

Your attention was no doubt attracted by a vigorous editorial which appeared last May in the *Southern Journal of Homœopathy*, under the heading of "A Defense Fund." Its topic was the "peculiar situation" of homœopathy in Alabama. It would seem that in consequence of recent judicial decisions that state is now open to all comers possessed of a legal medical diploma. The only hampering condition is that physicians locating in counties having county examining boards can not recover fees through suit unless they possess the certificate of qualification of those boards. This, the editor says, is practically no obstacle at all. "The bars are down and we must see to it that the allopaths are not allowed to put them up tighter than ever this fall." But in order to "head them off in this effort," legislative contests will be necessary, and these are "expensive luxuries." "A successful contest in Alabama will be of great value to us all over the union." * * * "Now is our time to act in so far as Alabama is concerned."

"The American Institute," continues Dr. Fisher, "will meet at Waukesha next month. It is our national associa-

tion, and the Alabama question is of national importance. The half-dozen or ten homœopaths in that State should not be allowed to fight the battle alone. They need help and they need money. * * * The *Journal* suggests that the American Institute take immediate steps towards raising a National Defense Fund, to be drawn upon by its legislative committee for use in Alabama or any other State where we are as yet in our struggling infancy. * * * * *

"The American Institute can well afford to set aside a defense fund, and we sincerely hope that this will be done at the meeting next month. The Southern Association will undoubtedly do all that she is able to do in the same direction, but her next meeting is a long way off, so our Alabama friends must bear the burden alone, look for help to individual subscriptions—a forlorn hope—or be sustained in this contest by the American Institute.

"Which shall it be?"

* * * * * * * *

"Prompt, decisive, financial action is necessary. Will the American Institute take the lead with an appropriation of five hundred or a thousand dollars?"

Taking for granted that such an appeal as this would be liberally responded to, I turned with considerable interest to the reports of the recent Waukesha meeting, to see how much had been contributed by the wealthy practitioners there assembled, and with what words of cheer they had upheld the hands of their struggling brethren in the South. Judge of my astonishment at being unable to find that "the situation in Alabama" had been once referred to in the whole course of the proceedings, or that a single dollar had been either paid or promised or suggested to be raised towards the establishment of the fund proposed. And yet Dr. Fisher himself was present, and took quite a prominent part in some of the debates: Can any one explain the meaning of this remarkable omission? Has the status of homœopathy in the "malarial belt" materially altered since the summer set in? Or is the "American" Institute in truth a *sectional* organization, and its "homœopathy" no longer an animating principle?

E. D. N.

## THE AVERAGE HOMŒOPATH.

Not being able to recognize the postal card as invested with the confidential nature of a sealed letter, I feel at liberty to use a communication received this day to illustrate my text. And as I wish to faithfully represent "the average homœopath," I am obliged to reproduce his communication as strictly as it is possible for the type to represent the pen:

"Memphis, Tenn., 6-3-'90.

"My dear Dr.,—Yours of May 30th received, sorry you can't be with us. While I agree that there is considerable dross in the profession, yet not to the extent that you put it. Think you were too severe on T. F. Allen. Kraft, it seems, has been picking a crow with you. I shall wait to see who gets the feathers and who the crow also to see who eats the crow. Think you struck a snag when you tackled Kraft.

Fraternally ——"

I forward to the editors of this journal the original to show that it has been faithfully reproduced in every detail.

I am able to aver that the particular specimen now under notice is somewhat above the average homœopath, in that he is the author of a medical work; wherein he did me the honor to plagiarize from a published paper of my own—thereby leading me to admire his taste as much as I detest his morals.

And this graduated thing has the refreshing audacity to write to me: "I agree that there is considerable dross in the profession, yet not to the extent that you put it." What must be the quality of the stuff that *he* can recognize as "dross?" And by his own acknowledgment "there is considerable" of it "in the profession!" And *he*, God save the mark! is above the average homœopath; and *he*, the devil take the mark! claims fraternity with me. Of a soul-sickening verity, I am, indeed, "eating crow" when such as this can write me "Fraternally!"

Who can doubt the eternal fitness of things, and the fellow-feeling between "things," when such an editor as Professor T. F. Allen is shown to be receives the compassion, and such a carricature of editorship as a Kraft the commendation, of, and from, *such* "dross" either in the profession or out of it.

S. A. JONES.

Ann Arbor, 6th June.

## SEA-WATER INJECTIONS IN GONORRHŒA.

*Messrs. Editors:* In the TIMES for August appears a statement copied from the *British Medical Journal*, to the effect that Mr. R. F. O'Brien, Dover, treated a number of cases of gonorrhœa successfully by means of sea-water injections.

For five or six years past I have treated both recent and long standing cases of gonorrhœa with common salt water injections successfully. My instructions to patients have been: Use sufficient salt to make the water about as salt as sea-water, and to take four or five (three at least) injections of this water as *hot* as can be borne daily. In the first day or two the secretions are increased, but relief is experienced, and gradually all symptoms—especially in recent cases—disappear inside of ten days.

As salt water of proper dilution is non-irritating to man's membrane and possesses antiseptic qualities, I inferred it would be useful as a hygienic measure in this disease and prescribed it in conjunction with the indicated remedy. Some patients neglected the internal treatment and made as good a recovery as those who were faithful to it. I therefore attribute the cure to hot salt water.

MALCOLM CAMERON, M.D.

## DR. PAINE AND THE N. Y. CO. MED. HOM. SOCIETY.

MESSRS. EDITORS:

*Gentlemen,*—Will you kindly inform me if the Dr. H. M. Paine, whose energetic action in securing the passage of the three headed examination bill called forth the enthusiastic resolution of Dr. Schley, at the June meeting of the N. Y. County Homœopathic Medical Society, as follows: "Resolved, that Dr. Paine be notified officially through our secretary of our thorough appreciation of his loyalty and determination to protect the interests of our school, and that we recognize the amount of patience and toil it cost him to carry this enactment to a happy issue," is the same Dr. H. M. Paine who was bitterly denounced by individual members of the County Society and tried and convicted by the State Society for securing a reorganization of the State Insane Asylum at Middletown. If I remember correctly, the attack upon Dr. Paine at that time was about as bitter and virulent as the recent one upon Dr. Guernsey and Dr. Rankin, and that then he was charged with anything but loyalty to his school.

Yours, respectfully,

VERITAS.

Precisely; it is the same old war horse, who generally carries through what he undertakes. Dr. Paine reminds us of the old story told of the renowned Col. Crocket who, when he raised his gun to shoot, the coon in the top of the tree called out, is that you, Col. Crocket? Well, don't shoot, 'taint no use, I'll come down. Possibly Dr. Paine may live to be ashamed of his triplets, but still he will undoubtedly all his life be proud of the great honor of having been thanked by Dr. Schley and the N. Y. Co. Homœopathic Medical Society.—EDS.

# TRANSLATIONS, GLEANINGS, ETC.

## RETROSPECTIVE THERAPEUTICS.

BY ALFRED K. HILLS.

**Chloride of Sodium in the Sickness of Pregnancy.**—Dr. Greene, in the *Med. Press*, states that he has recently had two very severe cases of sickness during pregnancy. The first patient had been under several physicans, who had tried all kinds of remedies, but nothing stopped the sickness. When seen by the author she was in the seventh month of pregnancy, and very much reduced. Before resorting to the induction of premature labor, it was decided to try the effects of small doses of chloride of sodium—common salt. It was given in five-grain doses in one ounce of chloroform water. After the first dose the sickness was lessened, and by the time six doses had been taken it had entirely ceased. It was found necessary to continue the medicine three times a day up to the time of delivery. The patient had a good labor and made a good recovery. In another case a similar treatment was followed by the same result. The action of this drug seems to be accounted for by its strong antacid properties, for in the case of both patients the secretions were very acid, yet soda, potash and ammonia, gave no benefit. The author suggests that the salt be called by its chemical title when prescribed, as some patients might despise the remedy if given as common salt.

**Warm Baths to Arrest the Spread of Erysipelas.**—Dr. A. Rose, of this city (*Med. Monatschr.*), recommends permanent warm baths as the most reliable counter-agent in erysipelas. His cases prove the efficacy of the suggestion.

**Creosote in Tuberculosis.**—Dr. Bourget, of Geneva, is an ardent advocate of the creosote treatment in consumption (*Wien. Med. Presse*). He urges the necessity of saturating the system with creosote. In winter the remedy is given in cod-liver oil. In summer it may be combined as follows:

℞. Creosote..... ʒ ss.
Liq. potassii arsenitis.....gtts. xx.
Vini malagæ..... ʒ xxiv.
M. Sig. Two wineglassfuls at meal time.

The patient constantly wears a permanent inhalation apparatus, consisting of two small pipes, one for each nostril, through the centres of which runs tissue-paper saturated with creosote.

Dr. Geo. W. Daywalt (*Notes on New Remedies*, May, 1890) says: A pure creosote is without toxic effects upon the human organism (Husemann). Dr. Scheteles administered hypodermically three (3) to seven (7) minims mixed with four (4) times the quantity of almond oil. He repeated this dose daily for months without noticing any unfavorable symptoms.

If the profession will first see that they secure a pure drug, and second, administer it properly, notwithstanding adverse criticism upon an indulgence in the hope to "place in the consumptive's pallid cheek the rose of health," they will not only share that hope too, but may eventually see removed from a vast number of their fellow beings the gloom caused by being doomed to die with an unavoidable and an incurable disease.

**Milk Diet in the Treatment of Scurvy.**—Tchelzoff (*Sem. Med.*, 16, 1890) treated one of his scorbutic patients according to the rules laid down in the text-books, but failed to relieve him. The patient then requested that he have the privilege of treating himself according to the custom in his province, by an exclusive milk diet, no other food being allowed. He soon recovered. At Rybinsk, on the Volga, Tchelzoff met with a severe epidemic of scurvy, and he cured twenty-eight cases in various stages of the disease by a strict milk diet. The action of this treatment is shown at first by disappearance of the pains and the fever. Then the swelling and induration of the limbs, the muscular pains, and the rigidity and tumefaction of the articulations, the cutaneous ecchymoses, and the affection of the gums, gradually disappear.

**Beetroot in Constipation.**—Dr. S. Karatchkof (*London Med. Record*, June, 1889) draws attention to the fact that a strong infusion or decoction of the common beetroot (*Beta Vulgaris; Russ., Bûraki* or *Sviokla*) represents an excellent mild aperient, very much in favor with the South Russian peasantry, who resort to it especially in cases of habitual constipation and hemorrhoids. It is taken in doses of from half to one tumblerful at bed-time or early in the morning—about an hour before breakfast. The remedy does not cause any abdominal pain, griping, or rumbling, nor does it create any tendency to consecutive constipation. On the contrary, any disposition in that direction is decidedly removed by a daily use of the decoction for a certain period. It is stated, however, that the patient's bowels get habituated to the beetroot in a week, so that, by the end of that time, the dose of the decoction should be increased, or a couple of apples a day be added.

**Valeriana in the Treatment of Hysteria.**—According to the *Hom. Journal of Obstetrics*, valerian and its salts occupy a definite place in gynecological practice, and especially in the treatment of hysteria. It is not so much adapted to hysterical spasms, with unconsciousness as with musk and asafetida, as it is to a general state of nervous and vascular excitement. Both mind and body are in a condition of irritation. The patient is lively, joyous, talking rapidly, with rapid chasing of thought after thought. Sometimes she imagines she is beset with dangers, or surrounding objects seem strange. She suffers from headache, giddiness and restlessness. Her muscular organism is so irritated that she can not keep quiet, she must move about. The same state influences her pains.

The provings show twinging, drawing, cramp-like, stinging, or darting pains, all worse when she sits and better when she walks. The circulation, too, is excited; her head feels full to bursting; constant heat and uneasiness; dry heat in the evening while sitting, flushes of heat. She is wide awake and restless all night, falling into a dreamy sleep towards morning. Digestion also suffers in the general nervous disturbance. Before dinner she has a taste as of fetid tallow, while early in the morning, on awakening, the taste is flat and slimy. Nausea, as if a thread was hanging in the throat, arising from the region of the umbilicus, and gradually ascending to the fauces. Bloated abdomen.

**Borax in Epilepsy.**—At a meeting of the Cardiff Medical Society, reported in the *British Med. Journal*, April 19, 1890, Dr. Stewart, assistant medical officer at the Glamorgan County Asylum, related cases illustrating the value of borax in epilepsy. From these he concluded that borax exercised a peculiar influence over nocturnal seizures, and that it was in cases where the fits were entirely of that kind that the greatest good might be expected; that bromide, on the other hand, exerted a more powerful influence over diurnal seizures, and that in cases characterized by both day and night fits a combination of these two remedies would be productive of most benefit.

**Thymol for Tape-worm.**—Campi's treatment for tape-worm is as follows: Give over night five or six fluid-drachms of castor oil. Next morning give early two drachms of thymol divided into twelve doses, one to be taken every fifteen minutes. Immediately after the last dose of thymol, give a dose of castor oil, and a few minutes the worm will be expelled entire.

**Glycerine in the Treatment of Ozena.**—At a recent meeting of the Society of Military Surgeons in Vienna, Dr. Sidlo strongly recommended the treatment of ozena with glycerine. His method consists in daily washing out the nasal cavity with a two per cent. solution of chloride of potassium, to which ten per cent. of glycerine has been

added. This is followed up with the insertion of rolls of cotton soaked in a mixture of one part of glycerine and three parts of water, the tampons being allowed to remain in place for an hour at a time. The method requires some weeks to effect a cure, but no one who has treated ozena often will think a few weeks too long to devote to any method which is likely to be successful. The one proposed by Dr. Sidlo is so simple and apparently so rational that it certainly seems worthy of future trial, and if other medical men can cure such cases as he has cured in this way, it will be a very useful addition to our therapeutic resources.

**Paraldehyde in Tetanus.**—A Russian physician reports two cases of tetanus cured by paraldehyde. The drug was given by the stomach and rectum in daily doses varying from one to two and a half drachms. One patient received twenty-five and one-half drachms in nineteen days, an average of eighty grains a day.

**Lactic Acid in Arthritic Rheumatism.**—According to Foster, of Leitz, Niemeyer's Pathology, 10th edition, vol. 11, p. 561: Lactic acid in large doses and used for a long time will produce symptoms entirely analogous to arthritic rheumatism. We also find mention elsewhere that the use of lactic acid occasioned rheumatic pains in the thigh. On these grounds, Dr. Tybel-Aschersleben, in *Allg. Hom. Zeitung* for March 13th, 1890, considers it a reliable remedy in the above mentioned complaint, and adduces the following clinical cases in support of his opinion:

1. A young girl, æt. 15, was afflicted with acute arthritic rheumatism; she received acid lacticum in the second decimal dilution, a dose every two or three hours, and was so much improved in two weeks that the pain had subsided, and she needed treatment only for her remaining weakness.

2. A nine-year-old girl was confined to her bed for three weeks with acute arthritic rheumatism. Acid lacticum, 2nd. cent. dil., speedily cured her.

3. A miner, B., had been afflicted over six weeks with acute arthritic rheumatism. The first dose of acid. lactic., 2nd dil., gave relief, and a second dose cured the man.

4. In a case with swollen and very painful joints one dose of acidum lacticum, 2nd, sufficed to overcome the pain and swelling.

5. Arthritic rheumatism of the wrist vanished slowly after using acid. Lact., 2nd, from two to three weeks.

6. A patient afflicted with arthritic rheumatism for four weeks, accompanied by copious perspiration, soon mended under the use of acid. lact., 2nd, and was entirely cured within two weeks.

7. Even in a case of chronic arthritis with inflammation of the epiphyses of the metacarpal bones and subsequent partial distortion of the fingers, lactic acid produced a decided amelioration that two months later the report said: "All pains are gone; even the ankylosis has disappeared."

The author adds that sometimes the remedy fails; nevertheless, the above good results justify a trial.

**Bryonia Alba as an Anti-Hemorrhagic.**—The bryonia alba, whose characteristics are distinct from the bryonia dioica, when administered to animals, contraction of the capillary vessels, which may be so complete as to lead to the direct arrest of the circulation. Professor Betresco states in the *Revue Internationale Des Sciences Médicales*, that he has employed preparations of this drug in cases of hemorrhages occurring from different sources; especially in post-puerperal metrorrhagia he has obtained the best results, using ordinarily 20, 25 or 30 parts of the dry root to 3,000 parts of water. M. Urbeano has analyzed this root, and has found in it several resinous principles and a glucoside, the latter being the most energetic of the active principles. Betresco suggests the name *breine* for the glucoside, from *brei*, the popular designation of the bryonia alba in Roumania. The author further states that 3 grains of the glucoside in 16 minims of water in the case of rabbits, or 1½ grains in the case of the frog, will produce marked vascular contractions. He believes that his results warrant him in concluding bryonia alba to be among the best anti-hemorrhagic remedies.

**Morrhuol-Creosote in the Treatment of Phthisis.**—Morrhuol (extractum olei morrhuæ alcoholicum), the active principle of cod liver oil, may be justly looked on as the type of those remedies, used in the treatment of consumption, which act by inducing hyper-alimentation (*Tribune Méd.*). According to Professor Germain See, cod liver oil is not only a nutritive, but owes its virtues to the active principle, which renders profitable and assimilable the carbo-hydrates and fats ingested. Besides the hyper-alimentary remedies used in pulmonary phthisis, there are numerous specific remedies used in the treatment of that intractable disease, one of which is of incontestable value. This is creosote. Recent clinical experiments in the Paris hospitals show that capsules containing three grains of morrhuol with one grain of pure beechwood creosote (the richest in guacol) in each give the happiest result where there is tuberculosis with corresponding defective nutrition. Dr. Lafage, speaking of clinical observations on phthisical patients, says: One of the most important and interesting features of morrhuol-creosote is the rapidity of its action. Nearly always after about eight days and always after fifteen days a considerable amelioration was produced, commencing by a decrease in the expectoration and cough, and a return of the appetite; it should always be remembered that the consumptive who eats and digests his food is capable of being cured. The stomach rapidly accommodates itself to the remedy, and the dose may be increased to six or more capsules daily. This dose (six), which represents thirty centigrammes (six minims) of creosote and ninety centigrammes (eighteen minims) of morrhuol, should be continued for several months if the pulmonary lesions were grave and there have been serious cavities. The remedy induces solidification of the softened pulmonary tissues and prevents formation of further mucopurulent sputa, thus tending to produce sclerosis of the cavernous surfaces.

Briefly, we have in morrhuol-creosote a remedy which, uniting the hyper-alimentary character of cod liver oil with the specific action of creosote, proves to be of great value in the treatment of pulmonary phthisis, particularly during the first stages.

Not only does it lessen or cure cough, but the ravages of the bacillus and the wasting processes are arrested, the appetite improves, while it eases expectoration, relieves dyspnea, promotes nutrition, arrests night sweats, diminishes the secretion of sputa and raises the general tone, very rarely causing nausea or disagreeable symptoms.

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Dr. J. W. Gleitsman, in the *Medicinische Monatascheift* for July, in an article on "Cough in Disease of the Upper Air-passages and the Operative Treatment of the Same," after mentioning the various parts of the body from which cough may be experimentally or pathologically induced, considers the cases in which cough is caused by excitants ordinarily having no such effect.

In the explanation of the same he apparently agrees with Brücke, who attributed the symptom to increased excitability of the centre for cough, and in accordance therewith restricts the denomination "nervous cough" to those cases in which no evidence of morbid local change is to be discovered, or where such has disappeared and left the cough.

To this physiological part of his article, exception is only to be taken respecting his definition of a cough, which is a quick forcible expiration, not *accompanied* but *preceeded* by a closure of the glottis following the initial deep inspiration.

The affections of the upper air-passages, which the author, in common with others, has thus found marked in occasional cases by cough are: 1. Adenoid vegetation of the vault of the pharynx. 2. Hypertrophic Rhinitis, Devia-

tion and Exostosis of the Nasal Septum and Nasal Polypi. 3. Hypertrophy and Chronic Affections of the Tonsils. 4. Granular pharyngitis. 5. Hypertrophy of the Lymphatic Glands at the Base of the Tongue.

The immediate cause of the cough in these cases may be either dryness of the mucous membrane from mouth breathing, or the gravitation of mucus, or the friction of the thickened surfaces upon movement.

In the removal of pedunculated growths by the Jarvis snare, the author uses an iridium-platinum, possessing greater stiffness than the ordinary platinum one, whereby the mass may be included nearer to its base. W. Y. C.

In the same issue of this journal Dr. A. F. Buechler gives an extended resumé of the literature of tertiary syphilitic affections of the penis, which especially in the pustulo-ulcerative forms are so difficult of diagnosis from *soft chancre*, without inoculation.

Dr. E. Vonder Goltz, furthermore, relates his experience with aniline as a new antiseptic; namely of aniline red (eosin?), methyl violet and crude aniline (aniline oil); the latter in one per cent. watery solution with the addition of one-third per cent. alcohol, the two former in two per cent. watery solution. The aniline oil in two per cent. solution caused pain on application, the others were without such effect.

With the above, the author has obtained marked, rapid and lasting effects in purulent ophthalmia, catarrh of the bladder, gonorrhœa, ulcers of the integuments, deep abscesses, traumatisms in general, and with a solution of the oil of 1:2000 in chronic eczema. He considers that the antiseptic powers of aniline depend upon its pre-eminently rapid diffusibility, whilst its innocuousness and chemical indifference in contact with metals recommends it above other substances.

The staining of the hands by the two coloring matters is to be removed by washing with petroleum and soft water. For ready use the substances may best be kept in ten per cent. alcoholic solution.

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**The Danger Limit From Scarlet-fever Contagion According to the Sanitarian,** varies with the period of desquamation, which is more or less rapid in different subjects. Hence the isolation of convalescents should vary accordingly, and should in no case terminate until desquamation is complete. It is rarely accomplished in less than forty days from the onset of the disease, and may not be, in feeble subjects, in less than twice that period; and during that time, no matter how long it may be, the subjects of scarlet fever should be prohibited from school or any other contact with other children; they should also be prohibited from public places and travel in public conveyances.

Desquamation is promoted and the danger of infection is diminished by daily warm bathing and the plentiful use of *pure* soap, particularly to the hairy scalp, followed by inunctions of benzoinated (or otherwise aromatized) lard, during the whole period of convalescence. Instead of such cleansing and anointing *the danger is frequently prolonged* by the employment of antiseptic soaps and solutions of such strength only as to be worse than useless, because they prolong the period of disintegration and destruction of the desquamated particles.*

*Disinfection* is quite a different matter. It can not be effectually applied to the person at any time, or to the room of the sick during occupancy, without danger. But it can be measurably applied, and the danger of infection mitigated. The rooms occupied by the sick and the convalescent alike should at all times be kept thoroughly ventilated. Physicians who are careful to require this, who do not spend an unnecessary length of time in the room with the sick, and who, when they have had cause to handle the patient, are careful to wash their hands in an *antiseptic solution* of corrosive sublimate, one dram to the gallon of water, which should be kept for the purpose, rarely carry infection. Nurses and all other persons much in the rooms with scarlatinal patients, or, indeed, any other infectious disease, should keep themselves from contact and association with other individuals, sick or well, who are liable to contract the disease, and whenever it is not possible for them to do so they should be especially particular with regard to the septic condition of their hands and clothing. Their nursing clothing should be of linen as much as practicable, or hard-finished cotton. They *should always*, on leaving the room for an outing or before commingling with other people, wash their hands in the corrosive sublimate solution. The wearing apparel and bed clothes of the sick, and that of the attendants which can not be promptly sent to the wash and, in the first place, subjected to *boiling water for not less than one hour*, should be kept, in the mean time, in an antiseptic solution of corrosive sublimate of twice the strength of that above given. Shoes should be thoroughly washed inside and out with the same. All worthless material should be promptly burned.

*Disinfection by Steam.*—As soon as possible after the removal of the sick, the room or the whole house, hospital ward, or the whole hospital, as the case may be, if the exposure to the disease has been of long continuance, still retaining all the bedding, bedsteads, carpets and upholstered furniture, everything that has been exposed that is worth preserving and not washable, should be *disinfected by steam* if practicable; and it is much more easily so, in cities especially, than persons generally, who have had no practical knowledge in the premises, imagine. India rubber hose is now made to stand a temperature above 212° F. By means of a sufficient length of it coupled to the boiler of an ordinary fire engine, with steam under such pressure as any of the boilers of such engines is abundantly capable of, steam at the temperature of 175° to 212° F., which is high enough, can be applied and kept up, as long as necessary, with great facility. Primarily the room, building, or ship to be disinfected should be closed up as tightly as possible. All chimney flues, stovepipe holes, and other like openings should be plugged, and all chinks around windows and doors carefully stuffed. Pieces of carpet, quilts and blankets may be the better exposed by hanging them over the windows, which may by this means be made all the tighter. Feather beds, mattresses, pillows, etc., should be thrown across the backs of chairs or otherwise exposed on all sides; and so, too, carpets, to better protect them against excessive moisture from the condensation of the steam, should be triced up through the stairways or hung on lines or racks.

The length of time required for disinfection by steam depends somewhat upon the nature of the material to be disinfected. For the steam to thoroughly penetrate feather beds, hair mattresses and upholstered furniture it should be kept up from two to three hours. Where there is nothing more compact than carpets and woolen clothing, from twenty minutes to half an hour is abundantly sufficient.

*Disinfection by Sulphurous Acid Gas* is, next to steam, all things considered, the most effectual and least destructive agent to clothing and furniture. For its use the same pains should be taken with regard to closing all openings and exposing the material on all sides as with steam, except laid carpets, which may be allowed to remain. But extra care should be taken to protect against fire. The pots or pans to hold the sulphur should not be filled up to the brim, and every one should be set in or over another vessel containing water. Thus protected, and the amount of sulphur proportioned at not less than three pounds to every one thousand cubic feet of space and properly dis-

*The best preparations for this purpose are the "Sanitas," either "Sanitas Jelly," or the fluid "Sanitas" as indicated.—Ed. MED. TIMES.

tributed, it may be easily fired by the addition of a little alcohol or kerosene and a match. The space should be kept tightly closed, subject to the fumes, for at least six hours.

A good deal has been said and published recently, mostly on theoretical grounds based upon laboratory experiments, by persons who have had little or no practical experience in the application of disinfectants, on the necessity of adding more moisture to the space and to the material to be disinfected by sulphurous acid gas than that provided as above directed for protection against fire. Considerable practical experience by the writer in the use of sulphur to disinfect rooms, furniture and clothing used by the sick with small-pox, scarlatina, diphtheria, measles and whooping cough, without any such addition and without any subsequent recurrence of the disease in the premises, is our justification for believing additional moisture unnecessary, while it greatly adds to the bleaching power of the vapor, despoils carpets and upholstery, which it will not otherwise do.

*Disinfection of the dejections* should also be effected in infectious diseases of every kind, because otherwise they are a source of widespread danger, no matter what the means of final disposal. One of the most easily obtainable as well as one of the most efficient agents for this is a solution of *chloride of lime*, half a pound to the gallon of water. Some of this should be constantly kept in the bed-pans used by the sick, and it should be freely poured into the water-closets connected with the house drains every time they are used. *Quicklime*, in the same proportion as that directed for the *chloride*, is almost, if indeed not quite, as efficient used in the same way.

*Corrosive Sublimate Solution*, half an ounce (with an equal quantity of muriate of ammonia to render it soluble) to the gallon of water, *sulphuric*, *muriatic* and *carbolic* acids, one part of either to two parts of water, are also efficient, but they require particularly careful handling on account of their corrosive properties, while they are no more efficient than the substances previously named; but none of them act immediately. The dejections should be thoroughly covered by and stirred into the solutions, and let stand at least two hours before they can be considered thoroughly disinfected and safe for the compost heap.

Doubtless there are many physicians whose practice is too exclusively confined to the cure of disease, and some health officers whose special duty it is to protect the public health by the prevention of disease, who will consider these views and directions extreme. But to all such *more attention to the mortality from infectious diseases and the value of human life* is urged as *the* reason above all others why better and more efficient methods should obtain. If *preventable* mortality is indeed *criminal* mortality, as now generally conceded, surely it is high time that those who are entrusted with the duty of preventing mortality should be held to a stricter accountability than hitherto.

*The safe disposal of the dead from infectious diseases* requires the utmost care from the outset. Public funerals over such should be absolutely prohibited. That *cremation*—and that speedily—is the safest means to the living is no longer an open question among sanitarians. When this can not be accomplished the body should be encased as soon as practicable, the bottom of the case being first covered with a layer of *quicklime* and the same substance stuffed in on the sides and over—completely enveloping the corpse on being laid in. The case should then be tightly closed, not again allowed to be opened under any circumstances, and speedily interred at least six feet deep and not less than two hundred feet from any well or watercourse.

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**A $200,000 Libel Suit.**—Suit has been entered by William Radam, manufacturer of Radam's Microbe Killer, against the *Druggists Circular*, of New York, for $200,000 damages, the largest amount so far as heard from that was ever asked for in a libel suit of this kind.

The pleadings show that the action is brought to recover damages claimed to have been done the business of the plaintiff by an article published in the *Druggists Circular* for September, 1889. This article gave the result of an analysis of the Microbe Killer made by Dr. R. G. Eccles, a prominent chemist of Brooklyn, who stated that an identical preparation could be made by the following formula:

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|---|---|
| Oil of vitrol (impure) | 4 drams. |
| Muriatic acid (impure) | 1 dram. |
| Red wine, about | 1 ounce. |
| Well or spring water | 1 gallon. |

This mixture, it was alleged, could be made at a cost of less than five cents per gallon for which Radam charged three dollars.

It was further alleged that while when properly used sulphuric acid, the principal constituent of the Microbe Killer, was a valuable medicine, it was, when taken without due caution or advice, a slow but certain cumulative poison; and the theories advanced by Radam, as to the causes of diseases and the proper method of treatment, were alleged to be totally erroneous. Col. Robert G. Ingersoll, the famous lecturer, is the counsel for the plaintiff.

The *Druggists Circular*, which is published at 72 William street, New York, expresses a desire to hear of any case in which unfavorable results have followed the administration of the Microbe Killer or of any other fact that would be interesting under the circumstances. They claim to have published the analysis without malice and with the sole intention of protecting the public from the loss of their health and money by the use of a dangerous nostrum.

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**Notes Upon Somnal, the New Hypnotic.***—Dr. Frank Woodbury in the *Dietetic Gazette* for July, says that "the effects of somnal in producing natural sleep suggest its use in insomnia. The first case in which I used it was in a patient suffering with acute alcoholism, who had been under treatment for a fortnight in an institution, where he had a free supply of liquor, and he came out rather worse than he went in. He was thirty-nine years of age, very tremulous, and could not sleep, or if he dozed off would immediately waken up. I gave him, at about 3 P. M., thirty minims of somnal (or rather a drachm of a mixture of equal parts of somnal and whiskey), well diluted, and went into an adjoining room to speak to an attendant. Upon my return I was surprised to find him fast asleep, although I had not been away from him more than fifteen minutes. He slept for four hours, and then was able to take something to eat. At ten o'clock he had another dose and he slept until seven next morning, having wakened up once only during the night and insisted upon having another dose, and immediately after taking it he fell asleep again. The next night he was given a double dose at 10 P. M., and he slept all night without wakening. No bad effects were observed. The somnal was given for four nights, when he was so nearly well that it was suspended, as he had had good natural sleep at night and seemed quite restored. Alcohol was positively prohibited, the only substitute allowed being Elixir of Coca and Camellia (P. D. & Co.), in tablespoonful doses, in which it is true there was a small amount of alcohol, which was quite infinitesimal when compared with what he had been using. Somnal, therefore, acts well as a hypnotic.

In a case of neuralgia of the bowels (visceral neurosis of Allbutt), where the patient had a sleepless night, a dose of twenty minims relieved nausea and pain, and the patient fell asleep.

In syphilitic headache and insomnia, somnal in moder-

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* The drug may be had of Elsner & Mendelson Co. of New York.

ate doses failed to produce sleep, which was afterwards secured by potass, bromide and iodide, and antipyrine.

In cases of insomnia, fretfulness and restlessness in young children, somnal with mint water and syrup offers better results than opiates, and is much safer. The same remark probably applies to the use of somnal in acute pneumonia, but I have not been able to confirm this yet by actual trial.

Without further going into detail it may be stated in conclusion that somnal acts as a hypnotic, but instead of depressing the system as chloral does, it slightly stimulates the gastric mucous membrane, relieves nausea and pain, improves the appetite, increases secretion (probably), does not cause constipation. The circulation, respiration and temperature are not notably depressed after its administration. No disagreeable after-affects have been observed. As it is rapidly eliminated from the body it may be administered each night for a number of days without any obvious ill-effects. It acts very much like chloral, but is more pleasant to take and not so depressing in its effects upon the nervous system and the circulation."

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**Temperature in Typhoid.**—Prof. Buck points to the information afforded by the clinical themometer in the diagnosis of typhoid fever as very important. In all acute specific fevers the temperature is abnormally raised; in typhoid, the elevation is gradual, while in most others it is abrupt. Further, if on the first or second day the maximum temperature reaches 104°, the disease is some other acute fever, as the temperature only gradually attains such a degree in typhoid.

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**Carbolic Plaster.**—Carbolic plaster is a useful preparation, because, when applied, it moulds itself accurately to the part, excluding the air and bringing the medicament into intimate relation with the part to be healed. It does not dry and become rigid, as if made with putty, but remains soft and flexible for a long time.

It is made by mixing carbolate of glycerine with prepared chalk. Carbolic acid one part and glycerine four parts is the formula for carbolate of glycerine.

Of glycerine carbolate take thirty-four parts by weight, and of prepared chalk, ninety-four parts by weight. Mix well by kneading and keep in closely stopped jars.

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**Dose of Tincture of Nux Vomica.**—Mr. Jonathan Hutchinson (*Archives of Surgery*, Jan., 1890, p. 280) says he has for many years prescribed the tincture of nux vomica very freely indeed. He thinks it the best of all tonics, for it very rarely disagrees, and he has never known it to produce poisonous effects. He generally gives ten minims three times a day to an adult, but often double that dose. He has given five minim doses to a child of ten, and has, for experiment taken himself a single dose of thirty drops, and realized no symptoms of strychnia poisoning whatever.

He believes the tincture of nux vomica to be a safer and more convenient form than any of the solutions of strychnia, and it has also the advantage of not exciting alarm in the patient. He says it may be taken for months together, and does not diminish in efficiency. Mr. Hutchinson has had many patients who have taken much more than was intended and yet so far never with any serious ill result.

He relates two cases. A gentleman, thirty-three years old, took by mistake five consecutive doses of forty minims three times a day, instead of ten minims during the same time, as ordered. The only ill result was that the head had been made to feel dull and the eyes heavy, as if he had been drunk over night. There was no muscular twitching.

In the second case the patient took forty minim doses of the nux vomica tincture. He continued it three times a day for four days in succession. The symptoms were exactly as in the other case—a dull feeling in the head, but no twitchings. He felt "wonderfully better for it."

**Treatment of Undescended Testicle.**—Mr. W. Watson Cheyne, Surgeon to King's College Hospital, London, has an interesting paper in the *British Medical Journal*, Feb. 15, 1890, in which he says that he has tried most of the plans suggested for bringing down undescended testicles to their proper position, and has, in all cases, after freeing the cord and testicle, stitched the latter to the lowest part of the scrotum by means of catgut, and afterwards placed catgut sutures in the external ring to prevent the testicle slipping up again into the inguinal canal. The immediate result is that as soon as the hold on the testicle is relaxed, it retracts to the external ring, drawing in the scrotum with it, thus forming a pucker, and the ultimate result is that the testicle lies at, or very little below, the external ring, in a position very little better than that which it formerly occupied. It struck him, however, if he could keep up the tension on the cord for some days it would gradually stretch, and that then, when the tension was relaxed, the testicle would remain in its new position in the scrotum.

The case he describes is that of a boy eleven years old, with both testicles in the inguinal rings, in which the old method failed on one side, and the new one succeeded on the other.

He had a small triangular wire frame constructed which fitted into the perineum and over the pubes, and was kept in its place by threads of carbolized silk, attached to each angle of the frame and passed round the abdomen and thighs. At a point opposite the apex of the scrotum a projecting bar was attached to the frame to which the thread which passed through the cord could be tied. The mode of operation in this case was as follows: The testicle and cord were freed and brought down into the scrotum in which a pouch was formed for its reception. A strong catgut stitch was then passed through the structures of the cord immediately above the testicle, and both ends were brought out through a hole at the apex of the scrotum and tied round the projecting bar. Care was taken that the vas deferens should not be on the side of the cord through which the thread might cut its way. In this way any desired amount of tension can be kept up on the cord, and in this particular case Mr. Cheyne did not stretch the cord at the time of the operation as completely as he intended ultimately to do, but tightened it at the second dressing some days later. After stitching up the external ring and the wound, the whole arrrangement was enveloped in antiseptic dressings.

Of course it is only in a certain proportion of these cases that any operation with a view of bringing down the testicle can be of benefit, and it should only be attempted in cases where the testicle was fairly movable in the inguinal canal and could be readily made to protrude at the external ring. Where the testicle is retained at the upper part of the inguinal canal, the cord very short and the testicle much atrophied, Mr. Cheyne believes it is best, in view of the serious trouble to which it may afterwards give rise, to excise it at once and bring together the walls of the inguinal canal.

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**Chlorate of Potash.**—Its well-known power of producing catarrhal inflammation of the kidneys should be a warning against its indiscriminate use as a gargle. It is said to be the most poisonous of all the salts of potassium.

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**Tomato Poisoning.**—Under this title Dr. Mills (*International Dental Journal*) describes a form of recession of the gums of the superior molars, which he believes to be due to the use of tomatoes as food. The affection is most marked on the palatine surfaces. Great sensitiveness is manifested along the line of recession, similar to that of an exposed nerve. The only remedy was found to be abstinence from tomatoes. If the disease continues the teeth fall out; not usually more than one being lost in a season.

### A BOSTON LULLABY.

Baby's brain is tired of thinking
On the wherefore and the whence;
Baby's precious eyes are blinking
With incipient somnolence.

Little hands are weary turning
Heavy leaves of lexicon;
Little nose is fretted learning
How to keep its glasses on.

Baby knows the laws of nature
Are beneficent and wise;
His medulla oblongata
Bids my darling close his eyes.

And his pneumograstic tell him
Quietude is always best;
When his little cerebellum
Needs recuperative rest

Baby must have relaxation,
Let the world go wrong or right—
Sleep my darling, leave creation
To its chances for the night.

—JAMES JEFFREY ROCHE.

**Technique of Intubation.**—Dr. Dillon Browne (American Pediatric Society) read a paper with this title. It had been his lot to see a great many cases of intubation, and his object was to present some practical points derived from his experience, and to call especial attention to the many badly made tubes and many dangerous modifications, which not only caused danger to the patient but brought disparagement upon one of the most brilliant and important operations of modern times. The difficulties of the operation had been greatly underrated. Although it required but a few seconds to insert the O'Dwyer tube, and the immediate results were most brilliant and gratifying, yet he knew of no operation in surgery which was more brutal and shocking than the efforts of an unskillful man to intubate the larynx. With each attempt the child grew more restless, more cyanotic, the clothes became soiled with blood, saliva and membrane, the attendants became frightened, and the scene was agonizing in the extreme. He ventured to say the great majority of deaths reported as due to pushing down the membrane were due to unskillful efforts, to apnea and asphyxia from prolonged attempts to force the tube through a false passage. Neither Dr. O'Dwyer nor himself had ever had a death on the table due to pushing down the membrane, and they had operated on nearly 700 cases.

The author then discussed the instruments and their modifications. There were three distinct sets of O'Dwyer's tubes—one for children, of six tubes; one for adults, of ten tubes, and a third one for cases in which there was a foreign body or loose membrane in the larynx. The set for adults differed from the children's set only in size, but the tube for foreign bodies differed materially from the others. Explaining the details of their make, the author said that if not constructed in the manner described they would cause ulceration at the head, or below, from impingement upon soft parts. It was only after much experience and with great care that an instrument maker succeeded. Most of those on the market would certainly do some harm, and many were absolutely dangerous to use. The most common defect was to throw the head away from the epiglottis by removing a portion from the posterior wedge. The result was ulceration. The next most frequent fault was to leave the lower edge thin, whereas the anterior edge should be rounded. Another common fault was failure to round off the anterior portion of the head of the tube.

Without exception, every one of the modifications which had been suggested had been previously tried by O'Dwyer before he presented them to the profession and had been found wanting. Sajous, he said, had never tried his modification on the living subject, and if he had he would not have presented it. The author thought the long tube would probably stand in preference to the short one. It was necessary to have the tube extend beyond the larynx a considerable distance in order to get a swelling on it to retain it in place.

It had been frequently asked why the tube could not be cast and the price greatly reduced. One party had succeeded in making an excellent tube cast in two pieces, soldered together afterward, because the edges soon became roughened.

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**Comparative Value of Tait's Method of Repairing the Perineum.**—According to Ott (*An. De Obst. Ginecop. Y Ped.*, Feb., 1890) the method of Simon-Hegar for repairing the perineum may be considered the normal method, for it is based upon the normal anatomical conditions of the parts. All modifications of such a method may be reduced to two particulars: 1st, the modification of the shape of the denuded surface; 2nd, the manner of maintaining the edges of the wound in contact until cicatrization has been accomplished. The shape of the denuded surface should be regulated in each case by the form and extent of the lesion; hence it is impossible to lay down a general rule for this operation which would apply in all cases. A double row of interrupted silk sutures is preferred by the author in closing the wound to any other method of material, as in this way infection is less likely to result, and the conditions are more favorable to the union of the tissue. If there is rupture of the sphincter ani and intestine, the intestinal mucous membrane is not included by the sutures, but successive rows of sutures are passed and the perineum is gradually built up. The method of Tait is believed to be contrary to normal anatomical conditions, and, therefore, the advantages of simplicity and rapidity of performance which are claimed for it have no real value.

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**Vaccination of the Newborn.**—Wolff (*Berl. Klin. Woch.*, No. 17, 1889) reports the vaccination of eight newborn infants, one to two days old, with humanized lymph, and has observed in them the normal development of the pustule with a complete absence of the vaccine fever. An equally good result was observed in thirty-four other newborn infants, in ten of which the mothers were vaccinated immediately before birth. Fifteen newborn infants were inoculated with animal lymph, and quite as many were successful as is the case in older children. The only point of remark in the two sets of inoculations was the much higher maximum of temperature reached in the cases in which animal virus was used. The author concludes that newborn infants are equally susceptible with older children to vaccination; that the operation is attended with no danger, and that in times of variola epidemics the newborn babes should be vaccinated without delay.

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**Treatment of Photophobia.**—At a recent meeting of the Paris Ophthalmological Society, as reported in *La France Médicale*, M. Guttierer Pouce spoke of a case of keratitis with intense photophobia, in which he had successfully treated that symptom by what he calls direct anesthesia of the casserian ganglion. This he effected by the simple device of inserting into the external auditory meatus a plug of cotton soaked in chloroform. Such an easy method to carry out in cases of photophobia certainly seems worthy of more extensive trial, and if it proves useful in other cases, it will be a valuable addition to the resources of physicians.

## MISCELLANY.

—Dr. Frank Kraft, editor of the *American Homœopathist*, takes the place in the Cleveland Homœopathic Medical College as Professor of Materia Medica in the place of Prof. H. H. Baxter, resigned.

—It is said the annual consumption of opium in China is 41,800,000 pounds.

—The presence of a melanotic tumor of the liver, it has been said, can be accurately determined by Segal's urine test. If a mixture of nitro-prussiate of soda, to which a solution of potash is added, be placed in the urine, it takes a dark red color if acetor is present. The color is intensified if acetic acid is added.

—A new hospital has been opened in Berlin with five hundred and seventy beds in eighty pavilions. The erection cost three and a half million of marks, and the electric plant for lighting one hundred and sixty thousand marks.

—Dr. Alexander Edington, of Edinburg, claims to have discovered a new blood cell, which he calls the *albocyte*. It is a small, spherical, colorless cell, having about one-third the size of the red cell. The special use of the new cell in the circulation has not yet been ascertained.

—Sir Morell Mackenzie, on account of ill-health, will postpone his visit to this country, and his engagements to lecture have been cancelled.

—Nature is a perpetual becoming. Progress is the law. Progression is eternal.

—It is said the American dentists use in the form of gold filling for the teeth 1,800 pounds of gold, representing $450,000.

—An officer in Italy, who had been hypnotized at a public séance, became almost insane. He would have attacks of spontaneous hypnotism when attracted by any shining object, and once, when following a carriage with bright lamps, came near losing his life.

—A remarkable and unusual case of homicide has just taken place in Warsaw, Russia. While a peasant was undergoing an operation, after being chloroformed, he suddenly sprang up from the operating bench, and in a frenzy of rage and terror, mortally stabbed the doctor and a sister of mercy. The patient was then removed to another hospital, where the operation was successfully performed without the aid of chloroform. The authorities in Warsaw are now debating whether the man should be tried for the murder of the doctor and the nurse, both of whom have died from the effects of the wounds they received, which were inflicted with one of the surgical instruments belonging to the unfortunate physician.

—A London physician has a patient who has a defect in his speech of a most singular character. The patient, a lad of ten, and English by birth, is unable to speak his native language, but articulates a jargon which can not be understood. He was examined by many doctors, none of whom could decide whether he spoke the same thing twice in the same way or not. The assistance of the phonograph was called in, and the lad, in the presence of several gentlemen, was asked to speak the Lord's Prayer and the alphabet. When a comparison was instituted between the various cylinders containing the record, it was found that there was no variation in the spoken words, and that it was quite possible for the language which the boy speaks to be understood by simply learning the various sounds.

—Germany complains of overcrowding in the medical profession, the number of doctors varying from 1 to 1,078 inhabitants in Berlin, to 1 to 6,289 in Grunbinnen. To increase the difficulty, the mortality among physicians has fallen from 2.68 per cent. in 1888 to 2 per cent. in 1889.

—The death-rate in England for 1889 was 17.9 per 1,000; and the curious fact is also recorded that, during the years 1881–89, an unparalleled low death-rate has been accompanied by a still lower birth-rate.

—It is said that the practice of drinking cologne is becoming very common in Europe and in this country, and as an indication of this that the sale of the perfume has increased greatly of late years. Women are more addicted to the habit than men, and a writer in the *Quarterly Journal of Inebrity* says that the presence of obscure and complex nervous disorders in a woman who uses cologne externally should always suggest the possibility of its internal use.

—The Nizam of Hyderabad has signified his intention of appointing female commissioners to take testimony in the harems. A handsome salary, guaranteed for a term of years, is the inducement; and any of our lady readers who are versed in the law and in the English, Arabic, Persian and Urdu languages can apply for the position.

—During the progress of the Hyderabad experiments, female monkeys were fitted with apparatus to resemble the feminine corset and chloroform administered. Two died promptly, and the others were saved with difficulty.

—Ten drops of tincture of iodine in a small goblet of water will usually arrest the nausea and vomiting that succeed an over-indulgence in strong liquor.

—Every one who has looked through a large telescope has noticed the purple rim around the edge of the object viewed. This is known as the secondary chromatic aberration, and has been regarded as a serious defect by astronomers. The announcement is made that Professor C. S. Hastings, of the Sheffield Scientific School of Yale College, has succeeded in combining two abbe glasses in such a way as to eliminate entirely this aberration, and to reveal objects in their natural colors. The discovery is one of substantial value—especially seeing that it can be used for celestial photography—and will doubtless greatly facilitate astronomical investigation.

—The third International Congress against the Abuse of Alcohol will be held in Christiania, Norway, from September 3d to 5th, 1890. Dr. Forel, of Zurich, will act as president. All communications should be addressed to the general secretary, Dr. G. E. Bentzen, in Christiania.

—According to Miss M. A. Bewsher, of Mauritius, it is a well authenticated fact that each hive in trophical countries has its "ventilating bees" during the hot season. Two or three of these bees are stationed at the entrance of the hive and cool the interior by incessant fanning with their wings. They are relieved at intervals by others, and while on duty are kept constantly at work by a sort of patrol of bees.

—Washington has a class of physicians known as "Sundown doctors," clerks in the government offices who have taken degrees in some one of the Washington medical colleges, and practice medicine after they have finished their clerical work.

—Credé is reported as having abandoned his method of expelling the placenta, because it may do more harm than good to the lying-in woman.

—Theodore Rosevelt says: "There is not a thought in a hogshead of beer, not an idea in a whole brewery. Nothing of merit was ever written under the influence of beer; it stupifies without invigorating, and its effect upon the brain is to stagnate thought."

—Dr. George Maxwell, of Florida, says "gin cocktail" made with ℥ viii of gin and ℥ ii of tincture of cinchona is almost a specific in yellow fever.